THE

BUILDER's COMPANION,

AND

WORKMAN's GENERAL ASSISTANT:

DEMONSTRATING,

After the moſt eaſy and practical Method,

ALL THE

PRINCIPAL RULES of ARCHITECTURE,

FROM

The PLAN to the ORNAMENTAL FINISH;

Illuſtrated with a greater Number of uſeful and familiar Examples than any Work of that Kind hitherto publiſhed;

WITH

Clear and ample INSTRUCTIONS annexed to each Subject or Number on the ſame PLATE;

Being not only uſeful but neceſſary to all MASONS, BRICKLAYERS, PLASTERERS, CARPENTERS, JOINERS, and others concerned in the ſeveral Branches of BUILDING, *&c.*

The Whole correctly engraven on 102 Folio COPPER-PLATES,

Containing upwards of SEVEN HUNDRED DESIGNS on the following Subjects, *&c.*

I. Of Foundations, Walls, and their Diminutions, Fitneſs of Chimneys, and Proportion of Light to Rooms, with the due Scantlings of Timber to be cut for Building, &c.

II. Great Variety of Geometrical, Elliptic, and Polygon Figures, with Rules for their Formation. Centering of all Sorts for Groinds, Brick and Stone Arches, &c. both Circular and Splay'd, alſo with Circular Sofits in a Circular Wall: Many Examples for Glewing and Vaneering, Niches, *&c.* with Rules for tracing the Cover of Curve-Line Roofs, Piers, Vaſes, Pedeſtals for Sun-dials, Buſts, *&c.* and their moſt ſuitable Proportions.

III. General Directions for Framing Floors and Partitions, Truſs-roofs, *&c.* and Methods to find the Length and Backing of Hips, ſtrait or curve Lines to any Pitch, Square or Bevel.

IV. Of Stair-Caſes, variouſly conſtructed; the Methods of working Ramp and Twiſt-Rails—Profils of Stairs to ſhew the Manner of ſetting Carriages for the Steps, alſo the framing of String-Boards and Rails, and likewiſe of fixing them.

V. The Five Orders of Architecture from *Palladio*, with the Rule for gauging Flutes and Fillets on a diminiſh'd Column, by a Method extremely eaſy, and intirely new.

VI. Doors, Windows, Frontiſpieces, Chimney-pieces, Cornices, Mouldings, *&c.* truly proportion'd, in a plain and genteel taſte.

VII. Sacred Ornaments, *viz.* Altar-pieces, Pulpits, Monuments, *&c.*

VIII. Gothic Architecture, being a various Collection of Columns, Entablatures, Arches, Doors Windows, Chimney-Pieces, and other Decorations in that prevailing Taſte—And it may be noted of theſe, as of all the foregoing Examples, that they are immediately adapted to Workmen, and may be executed by the meaneſt Capacity.

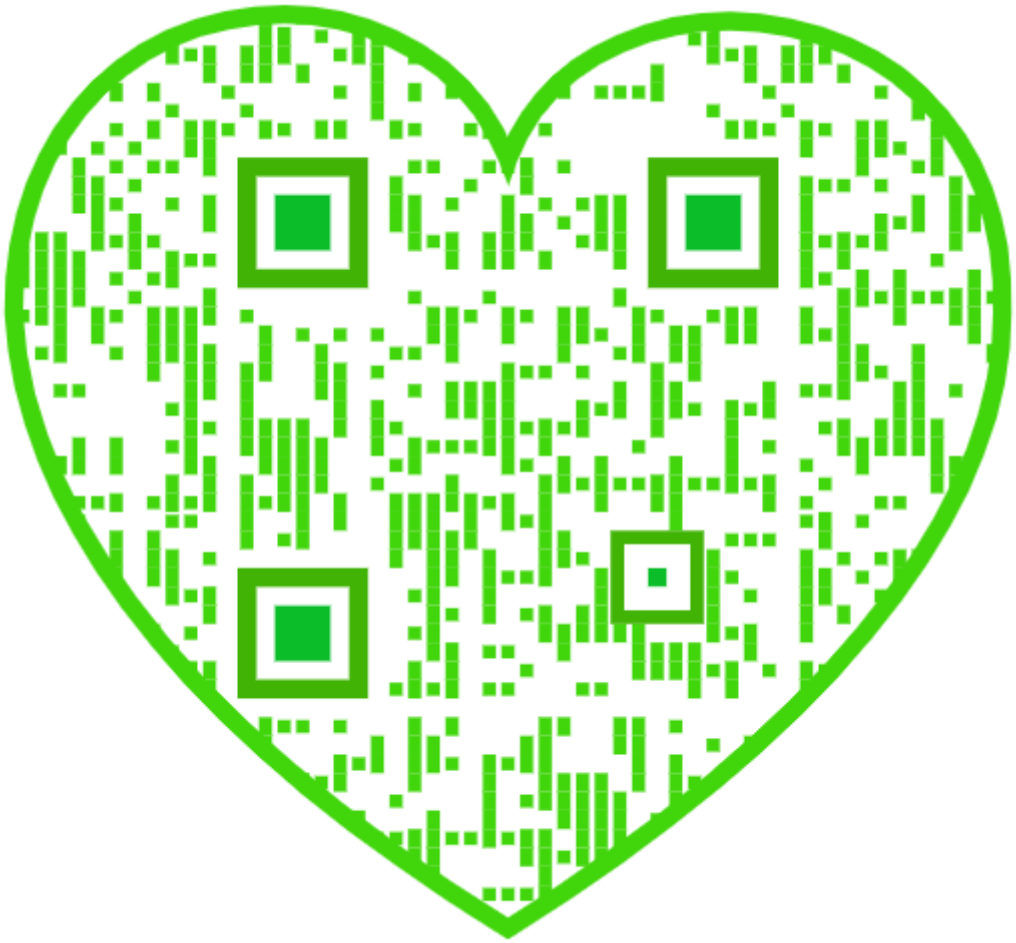
By *WILLIAM PAIN*, Architect and Joiner.

LONDON:

Printed for the AUTHOR, and ROBERT SAYER, at the Golden Buck in *Fleet-Street*,

MDCCLXII.

Facsimile of Original Title Page



FOREWORD

A VITAL IMPETUS was given to architecture in the eighteenth century by the number of British architectural hand-books which appeared. The accepted manner in England was soon echoed in America and the master builders and designers here manifestly looked to the English pattern books, published and republished since 1700 for their designs of moldings, cornices, entablatures; for portals and even for facades.

A careful examination of these early works would seem to indicate that they were not such complete guides as to leave no need for creative ability on the part of the individual who used them. They were, with rare exceptions, merely books of "the orders" and were not manuals of English architecture.

A part of the working library of one of America's justly famed carpenter-builders of the eighteenth century has recently been discovered. The oldest of these volumes is dated 1724. Many of the treatises present a similarity of plan. They first offer elementary problems in geometry after which are included plates of the five orders and in addition details of construction and such architectural elements as windows, doors and mantels. By the omission of suggestions for plan arrangement, and, in most books, the complete facade design, it was probably implied that the responsibility for the design of an ensemble rested with the individual to whose capacity these hand-books were a "remembrancer."

The knowledge that these books on architecture were owned by "practising architects" in America in the middle of the eighteenth century strengthens our conviction that the hand-books were generally within arm's reach of the amateur designer. They were published at a time when almost every man of culture in England interested himself in architecture and when a high standard of lay criticism existed.

Believing that those interested in the sources of colonial work would enjoy having a reprint of one of the best and least familiar of these books, we have selected "*The Builder's Companion*" by William Pain, which was published in London in 1762 and which was in use in the Colonies in 1763.

A majority of the folio copper plates in this rare work will be published, in this and the next number of THE MONOGRAPH SERIES. The two parts will furnish the reader with a document which should be interesting not only to the lovers of Colonial architecture but also as a working tool in the drafting room. The first twelve plates are selected from the illustrations of the Five Orders. These are followed by Frontispieces, Proportions of Doors and Windows. The second part will contain the Pediments, Piers for Gates, Vases, Sun Dials, the proportions of Cornices to Rooms, Mouldings, Mantels, Stair Cases, Pulpits, Etc.

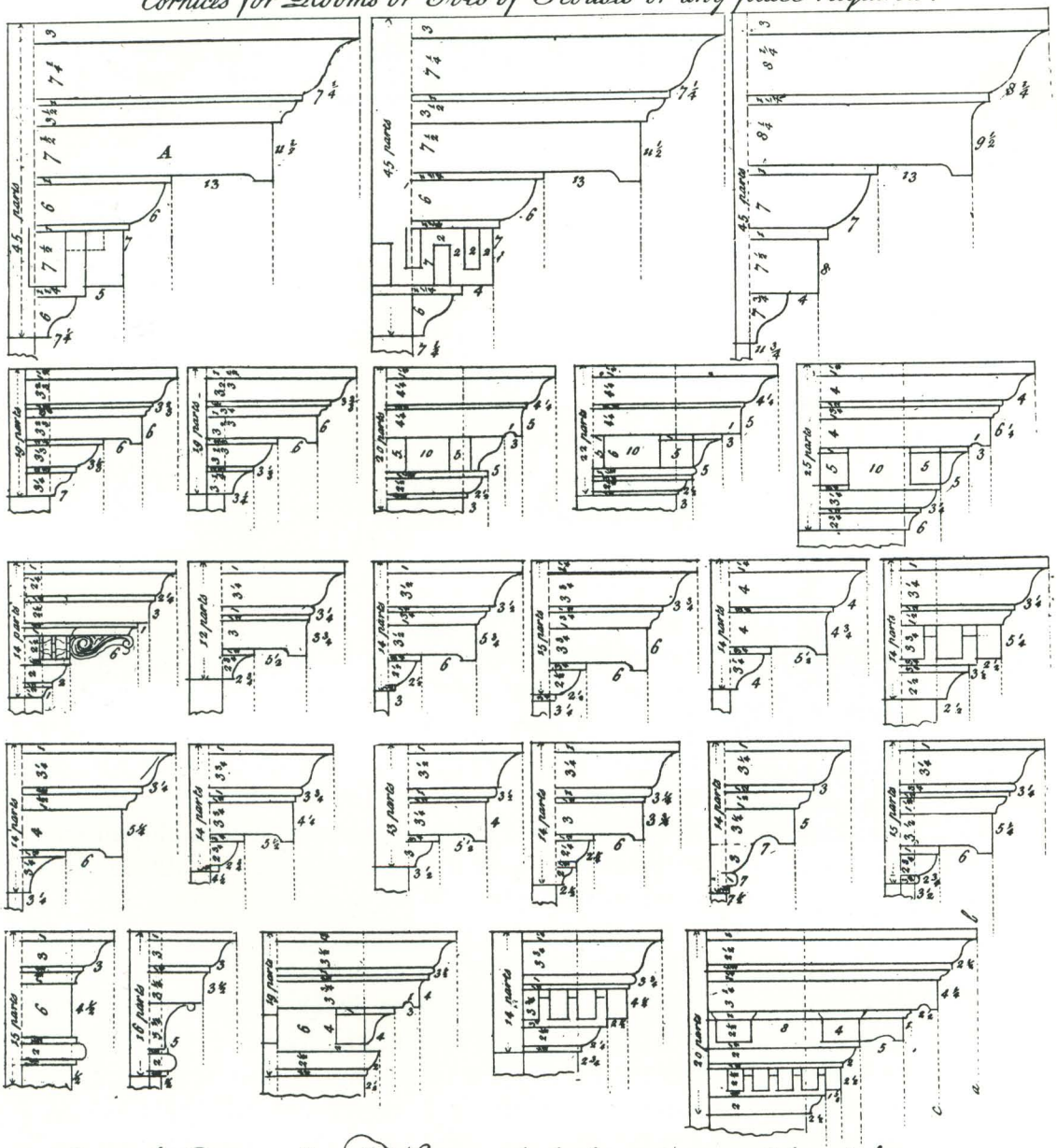
The modern designer will be convinced, we feel sure, that William Pain, Architect and Joiner, endeavored to catch the spirit of classic proportion and "by an intire New Scale" to show the significance of the orders and to make it easy for anyone to adapt the proportions to modern usage. Our early architecture was not molded by buildings of the mother country so much as by the engraved specimens of the Italian Renaissance and Roman orders. To study the following Plates, not so much with a view to achieving their exact reproduction, but rather to acquire the sense of elegance, proportion and delicacy with which so many of them are redolent, will more than repay the student of architecture.

THE EDITOR

NOTE: This foreward appeared in the 1931 reprint of William Pain's *The Builder's Companion*, published as White Pine Monograph Volume XVII, Number 1. We have included Russell Whitehead's foreward because it provides background on early builder's handbooks in general, and William Pain's work in particular.

REPRINTED from The Builder's Companion *by* WILLIAM PAIN

Cornices for Rooms or Eves of Houses or any place Required.



25 Cornices for Rooms or Eves of Houses with the Grose Measures, all figured; how many parts Each Cornice is to be Divided into, and them parts disposed to each Member, as they are figured in height and Projection. To find the Grose measures of the Cornices in height divide from the Floor to the Ceiling into 15 parts, take one for the Cornice, or divide into 16 parts, one is the Cornice; or if the height be divided into 35 parts take two for the Cornice and in some Cases the height may be divided into 18 parts then take one for the Cornice. any of these Grose Measures may be used at pleasure according to the places they are Required to set on the Projections, drop a plumb Line as a, b, then set Back 2 ½ and 4 ½ then drop one at c, set Back 2 ½ and so for all the rest which is plain to Inspection.

REPRODUCTION of Copper-plate engraving by WILLIAM PAIN, Architect and Joiner
PUBLISHED IN LONDON, 1762

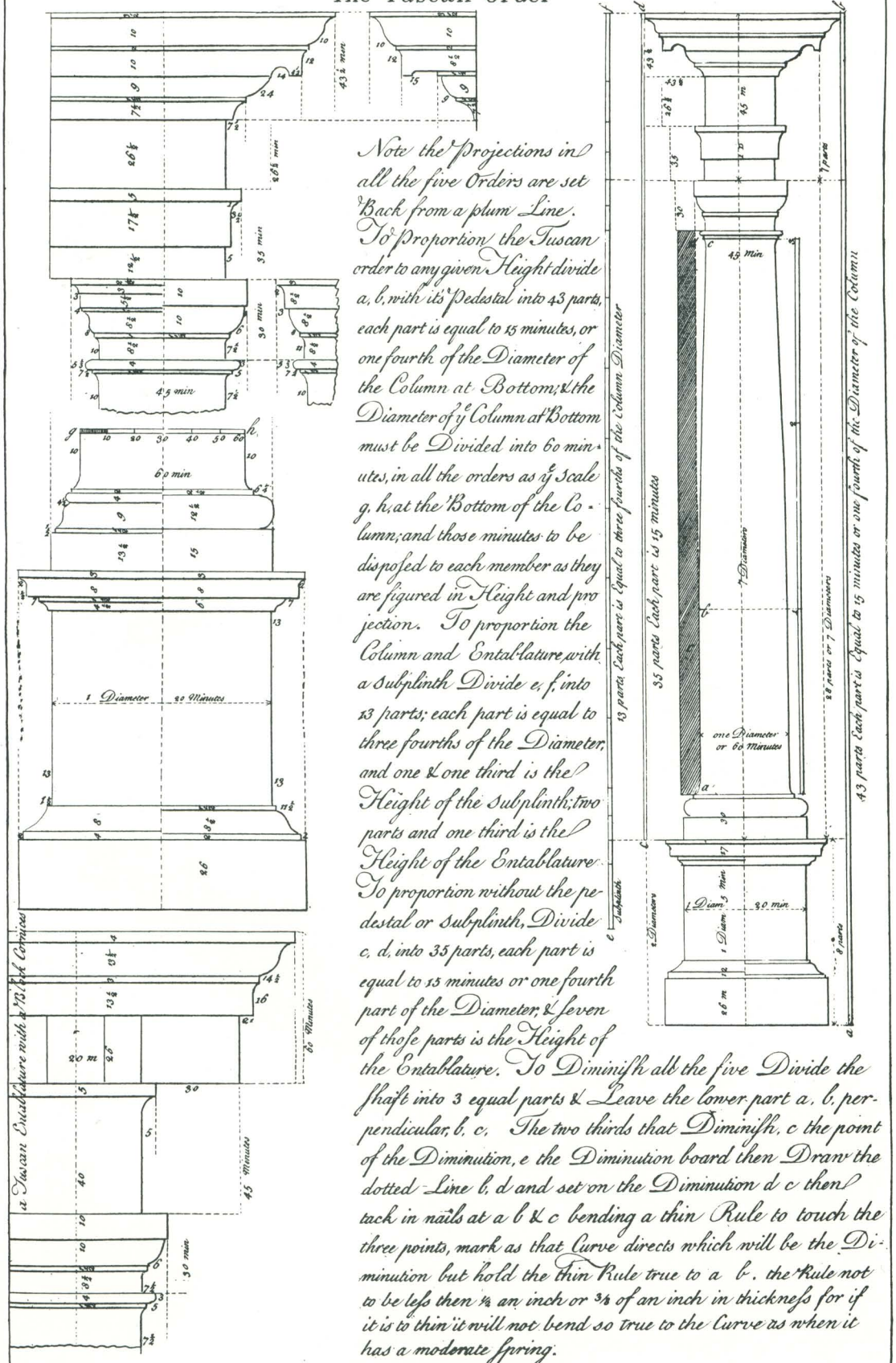
PREFACE

TO THE

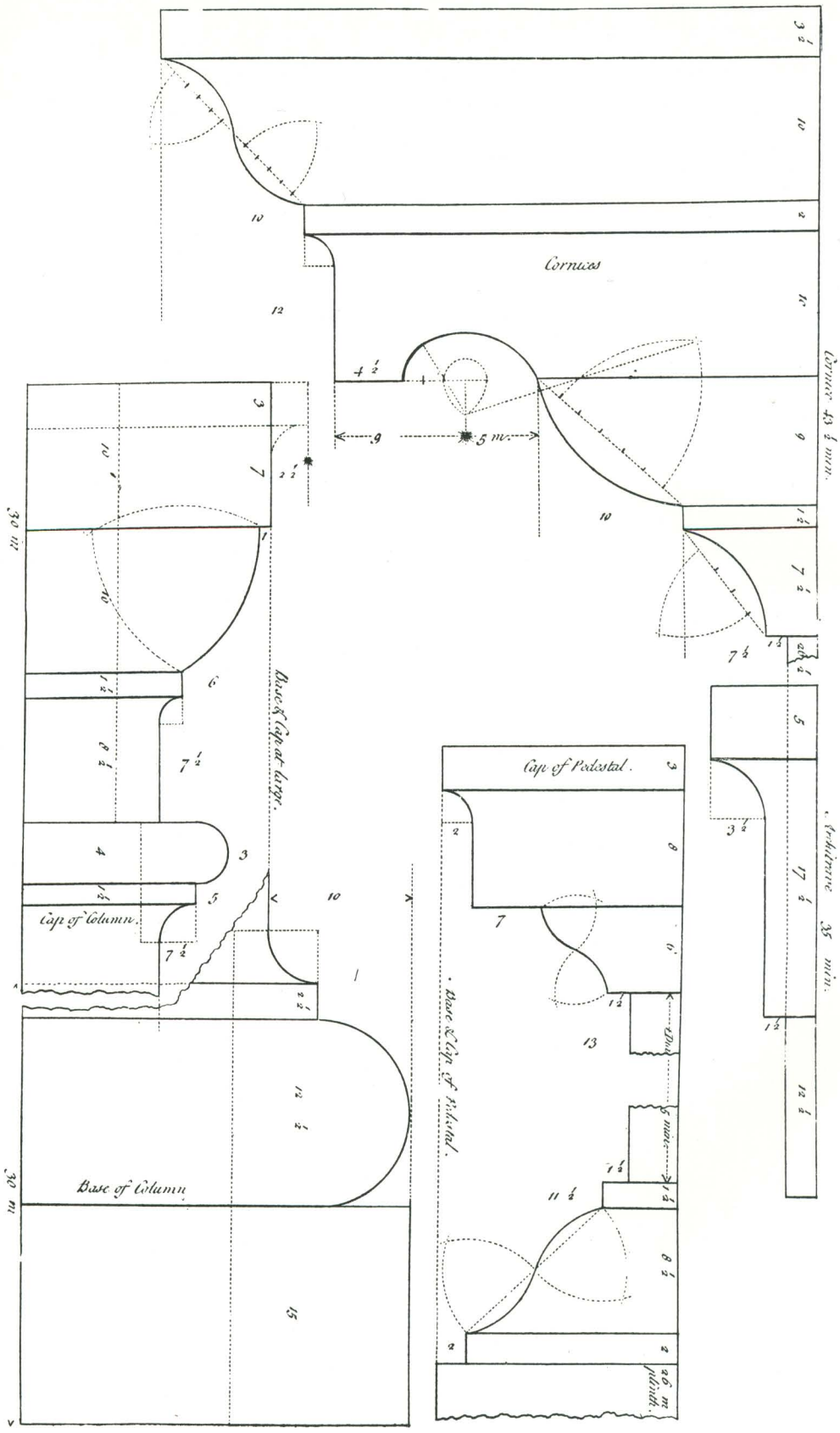
READER.

AS in all Things Order is to be obſerved, ſo eſpecially in this excellent Art of Architecture it is requiſite that every Part and Member have its right Order and due Proportion. There have been many Maſters who with great Care and Induſtry have brought this Art to a great Perfection, among whom the famous PALLADIO deſerves to be placed in the higheſt Rank by all judicious Artiſts; therefore for the Benefit of Workmen, and that it may be made more uſeful for all Artificers in Building and Lovers of this moſt noble Art, I have laid down the five Orders of Architecture according to PALLADIO by an intire NEW SCALE, to proportion the Orders to any given Height, and to find the Model or Diameter of the Column, with every Part of the Orders by the ſaid Scale; and for the better underſtanding of which, the Reader is deſired to take notice, that by the Model is ſignified the Meaſure of the whole Diameter of the Column: As for Example; Let the Diameter be twelve, fifteen, or eighteen Inches for the Model, to be divided into ſixty Parts or Minutes, as may be ſeen by the Scale on the Diameter of the Column in Page 32, that Scale meaſuring every Member in the Order, which will be proportionable one to another; this dividing of the Diameter into ſixty Parts or Minutes, muſt be uſed in all the Orders, in which I have, with my utmoſt Endeavours, rendered it very intelligible, with a great Number of other uſeful Things for the Benefit of Workmen.

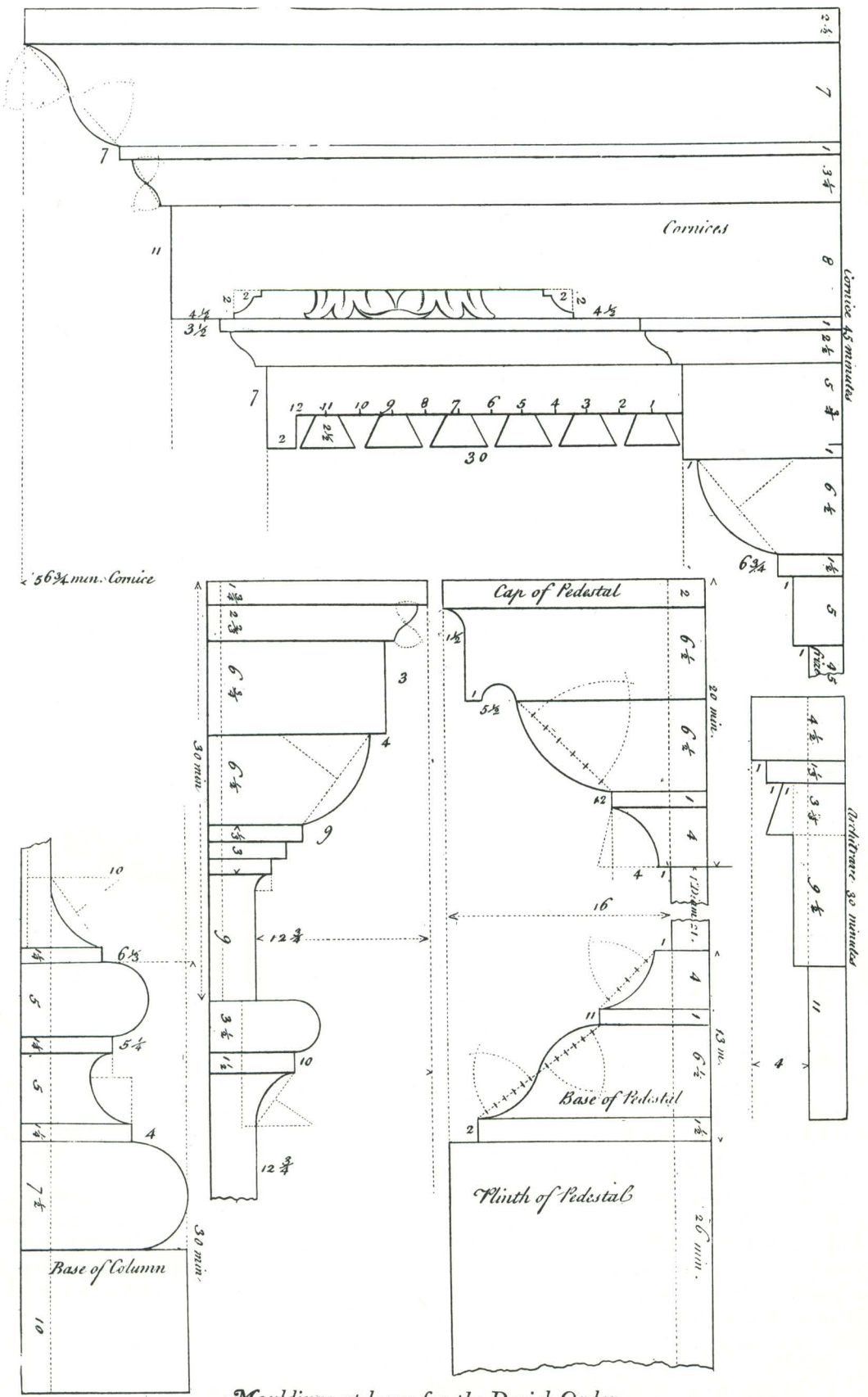
The Tuscan Order


a Tuscan Entablature with a Plain Cornice
60 Minutes
45 Minutes
30 min
60 min
45 min
1 Diameter 30 Minutes
Subplinth
13 parts Each part is Equal to three fourths of the Column Diameter
35 parts Each part is 15 minutes
28 parts or 7 Diameters
43 parts Each part is Equal to 15 minutes or one fourth of the Diameter of the Column
one Diameter or 60 Minutes
1 Diam 30 min
1 Diameters
8 parts

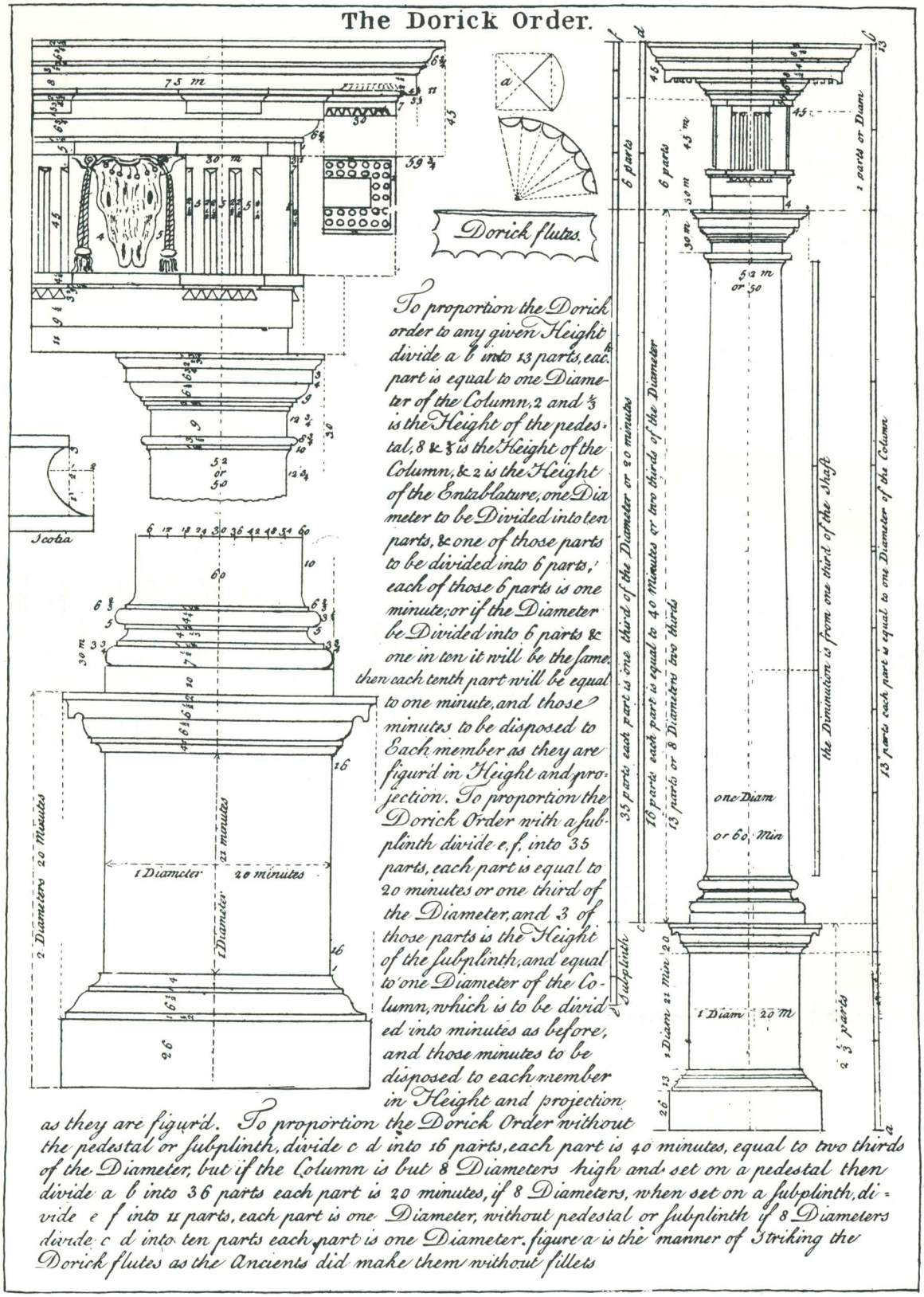
Note the Projections in all the five Orders are set Back from a plum Line. To Proportion the Tuscan order to any given Height divide a, b, with it's Pedestal into 43 parts, each part is equal to 15 minutes, or one fourth of the Diameter of the Column at Bottom; & the Diameter of y^e Column at Bottom must be Divided into 60 minutes, in all the orders as y^e Scale g, h, at the Bottom of the Column; and those minutes to be disposed to each member as they are figured in Height and projection. To proportion the Column and Entablature with a Subplinth Divide e, f, into 13 parts; each part is equal to three fourths of the Diameter, and one & one third is the Height of the Subplinth; two parts and one third is the Height of the Entablature To proportion without the pedestal or Subplinth, Divide c, d, into 35 parts, each part is equal to 15 minutes or one fourth part of the Diameter, & seven of those parts is the Height of the Entablature. To Diminish all the five Divide the shaft into 3 equal parts & Leave the lower part a, b, perpendicular, b, c, The two thirds that Diminish, c the point of the Diminution, e the Diminution board then Draw the dotted Line b, d and set on the Diminution d c then tack in nails at a b & c bending a thin Rule to touch the three points, mark as that Curve directs which will be the Diminution but hold the thin Rule true to a b. the Rule not to be less then ½ an inch or 3/8 of an inch in thickness for if it is to thin it will not bend so true to the Curve as when it has a moderate spring.



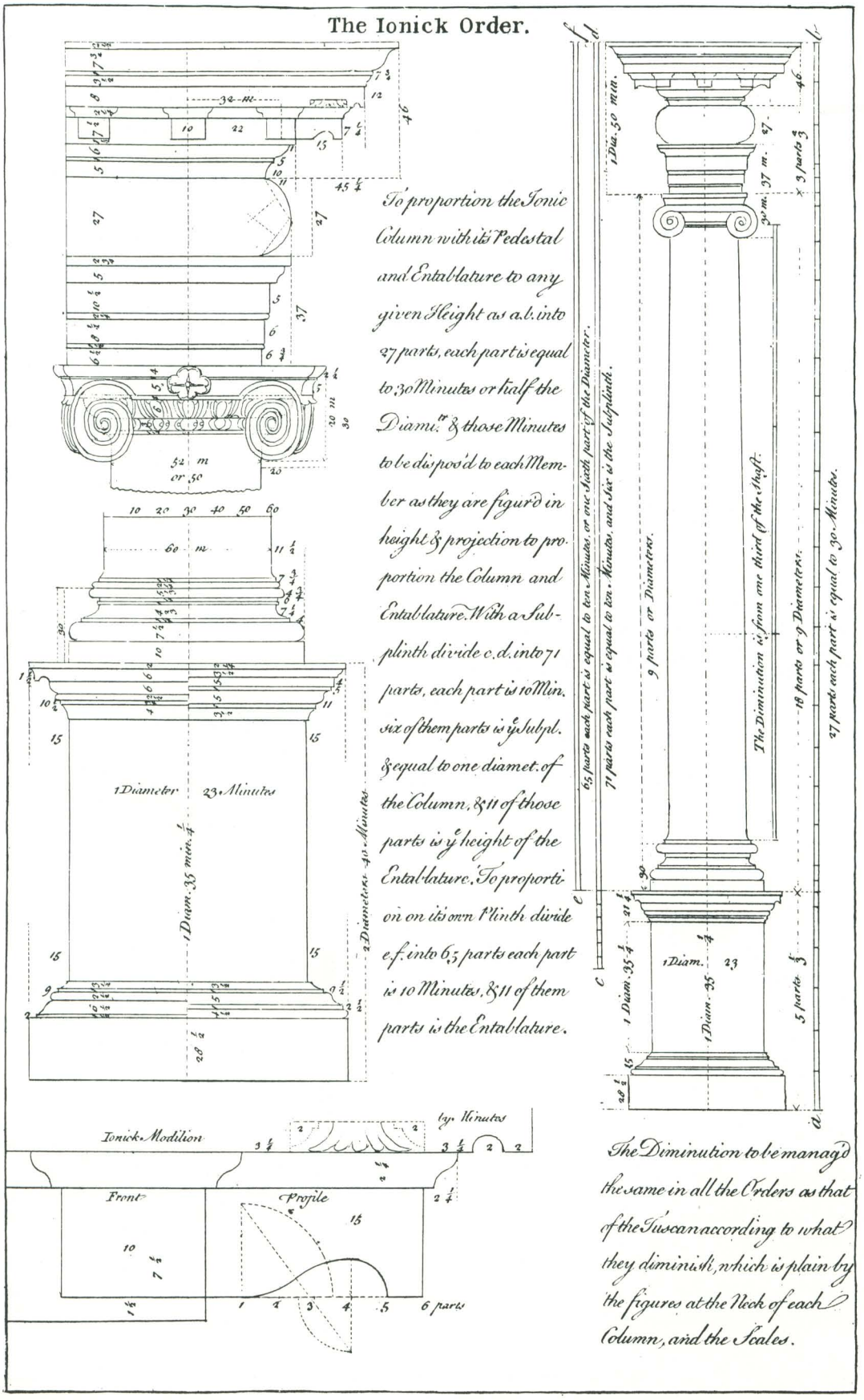
Mouldings at large for the Tuscan Order

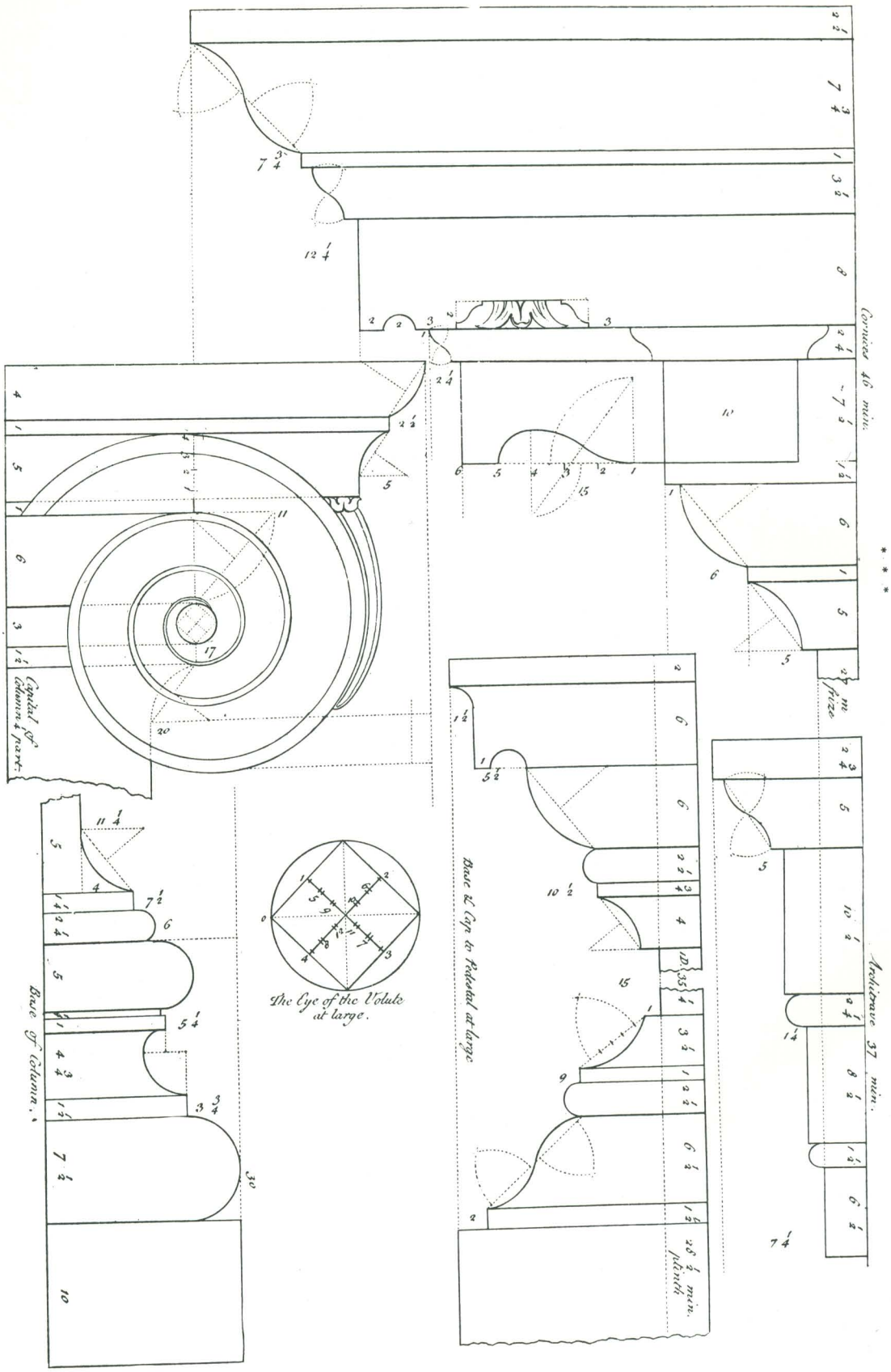


Mouldings at large for the Dorick Order

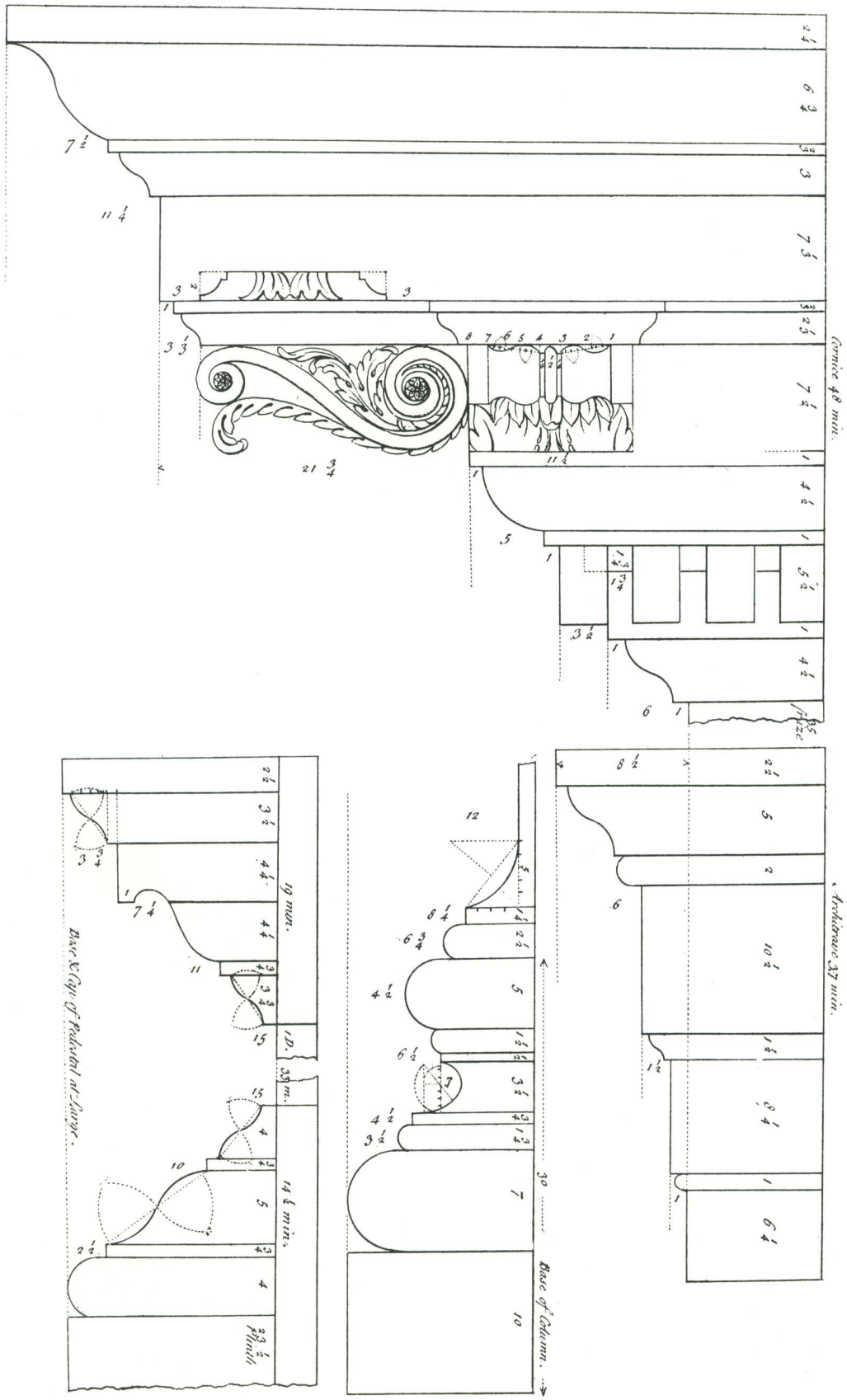

The Dorick Order.
Dorick flutes.
Scotia
1 Diameter
20 minutes
2 Diameters 20 minutes
1 Diameter
22 minutes
6 parts
35 parts each part is one third of the Diameter or 20 minutes
16 parts each part is equal to 40 minutes or two thirds of the Diameter
13 parts or 8 Diameters two thirds
1 parts or Diam
13 parts each part is equal to one Diameter of the Column
the Diminution is from one third of the Shaft
one Diam
or 60 Min
Subplinth
1 Diam 20 M
2 3/4 parts

To proportion the Dorick order to any given Height divide a b into 13 parts, eac. part is equal to one Diameter of the Column, 2 and ⅓ is the Height of the pedestal, 8 & ⅔ is the Height of the Column, & 2 is the Height of the Entablature, one Diameter to be Divided into ten parts, & one of those parts to be divided into 6 parts, each of those 6 parts is one minute; or if the Diameter be Divided into 6 parts & one in ten it will be the same. then each tenth part will be equal to one minute, and those minutes to be disposed to Each member as they are figur'd in Height and projection. To proportion the Dorick Order with a subplinth divide e f into 35 parts, each part is equal to 20 minutes or one third of the Diameter, and 3 of those parts is the Height of the subplinth, and equal to one Diameter of the Column, which is to be divided into minutes as before, and those minutes to be disposed to each member in Height and projection as they are figur'd. To proportion the Dorick Order without the pedestal or subplinth, divide c d into 16 parts, each part is 40 minutes, equal to two thirds of the Diameter, but if the Column is but 8 Diameters high and set on a pedestal then divide a b into 36 parts each part is 20 minutes, if 8 Diameters, when set on a subplinth, divide e f into 11 parts, each part is one Diameter, without pedestal or subplinth if 8 Diameters divide c d into ten parts each part is one Diameter. figure a is the manner of Striking the Dorick flutes as the Ancients did make them without fillets

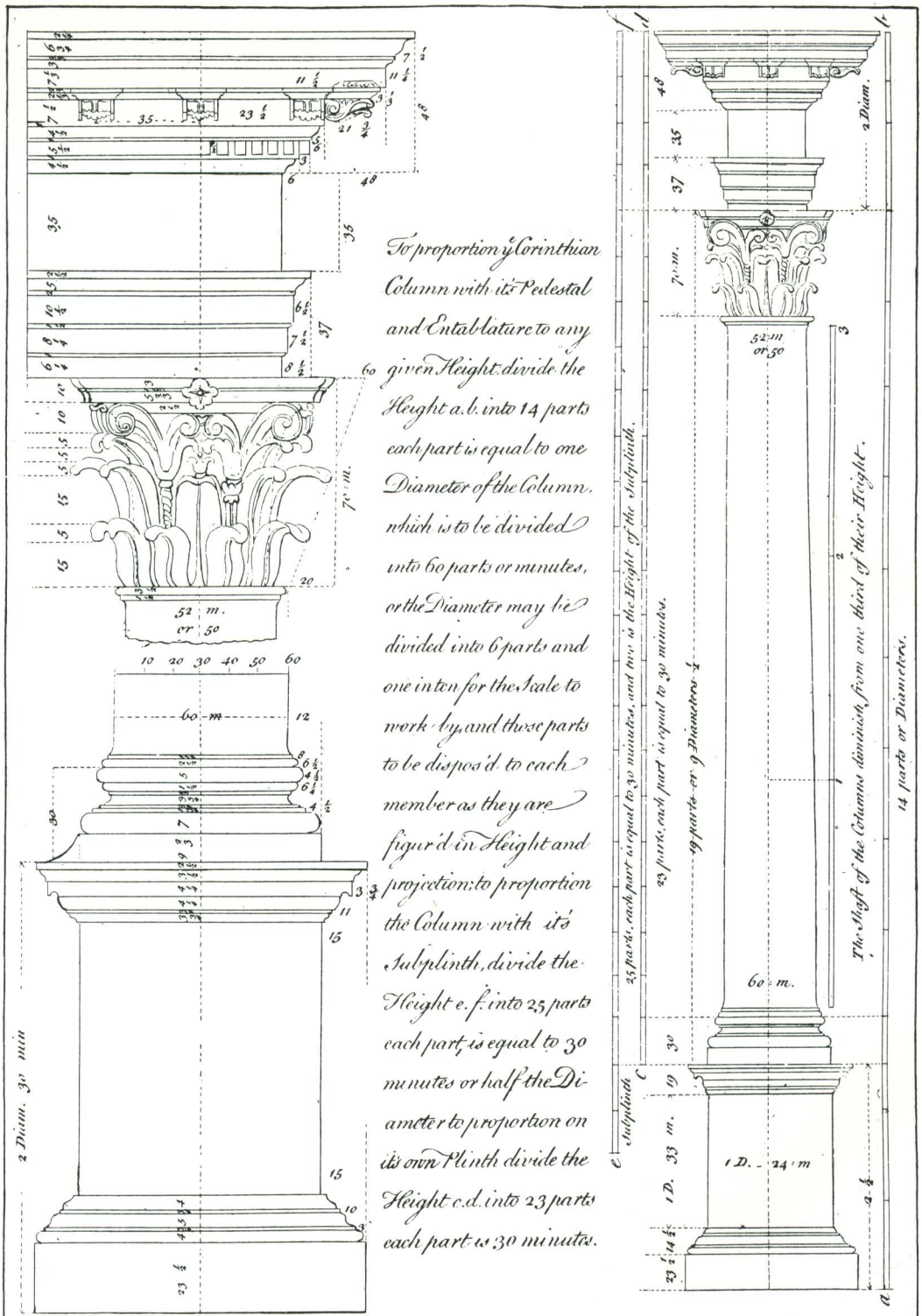

The Ionick Order.
To proportion the Ionic Column with its Pedestal and Entablature to any given Height as a.b. into 27 parts, each part is equal to 30 Minutes or half the Diam.r & those Minutes to be dispos'd to each Member as they are figur'd in height & projection to proportion the Column and Entablature. With a Subplinth divide c.d. into 71 parts, each part is 10 Min. six of them parts is 6/71 Subpl. & equal to one diamet. of the Column, & 11 of those parts is 11/71 height of the Entablature. To proportion on its own Plinth divide e.f. into 65 parts each part is 10 Minutes, & 11 of them parts is the Entablature.
1 Diameter 23 Minutes
1 Diam. 35 min.
2 Diameters 40 Minutes
1 Dia. 50 min.
65 parts each part is equal to ten Minutes, or one Sixth part of the Diameter.
71 parts each part is equal to ten Minutes, and Six is the Subplinth.
9 parts or Diameter.
The Diminution is from one third of the Shaft.
18 parts or 9 Diameters.
27 parts each part is equal to 30 Minutes.
1 Diam. 23
1 Diam. 35
5 parts
3 parts
Ionick Modillion
Front
Profile
6 parts
The Diminution to be manag'd the same in all the Orders as that of the Tuscan according to what they diminish, which is plain by the figures at the Neck of each Column, and the Scales.


Capital of Column & part.
Base of Column.
The Eye of the Volute at large.
Base & Cap to Pedestal at large
Cornice 46 min.
Frize
Architrave 37 min.

Mouldings at large for the Ionick Order



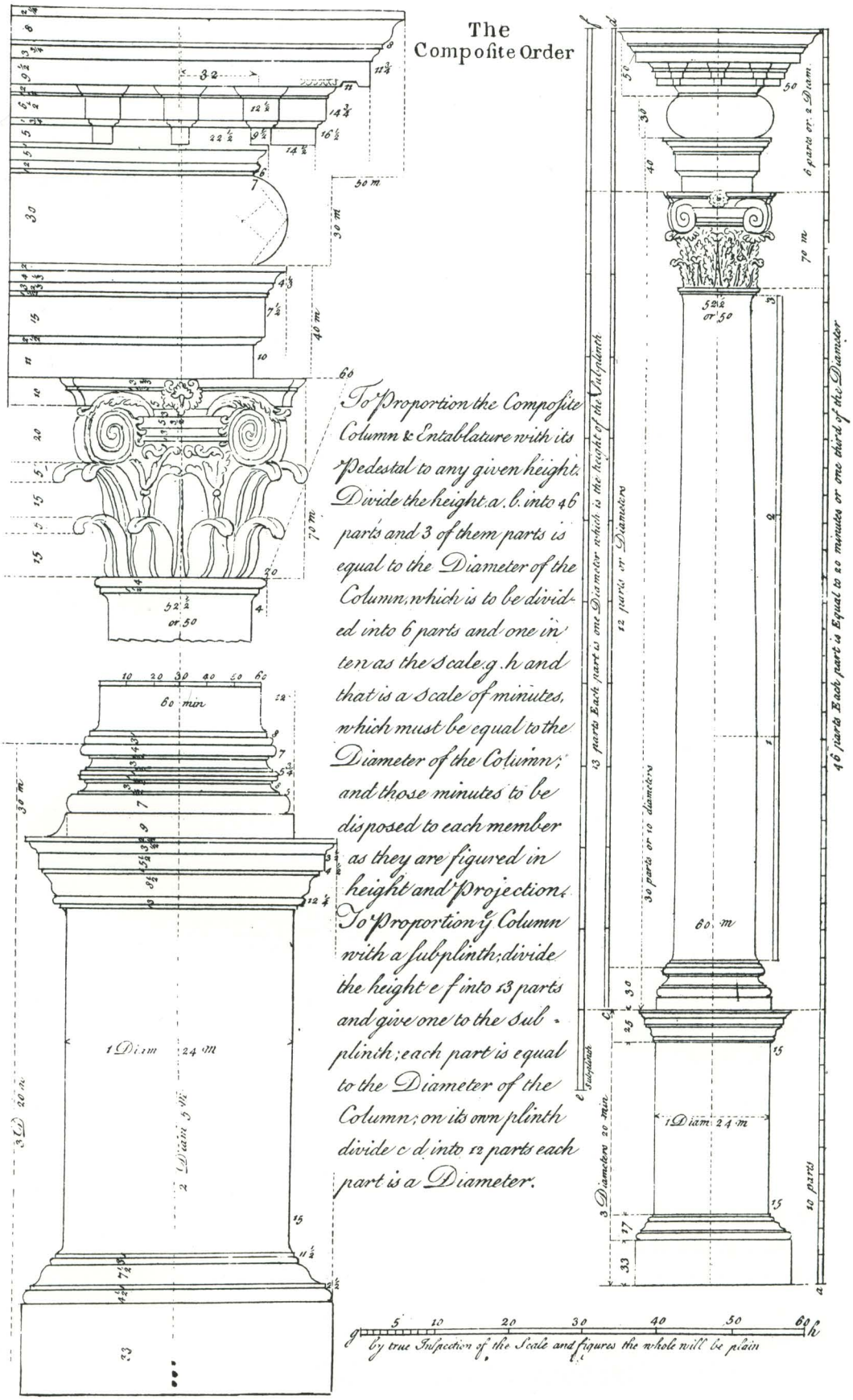
Mouldings at large for the Corinthian Order

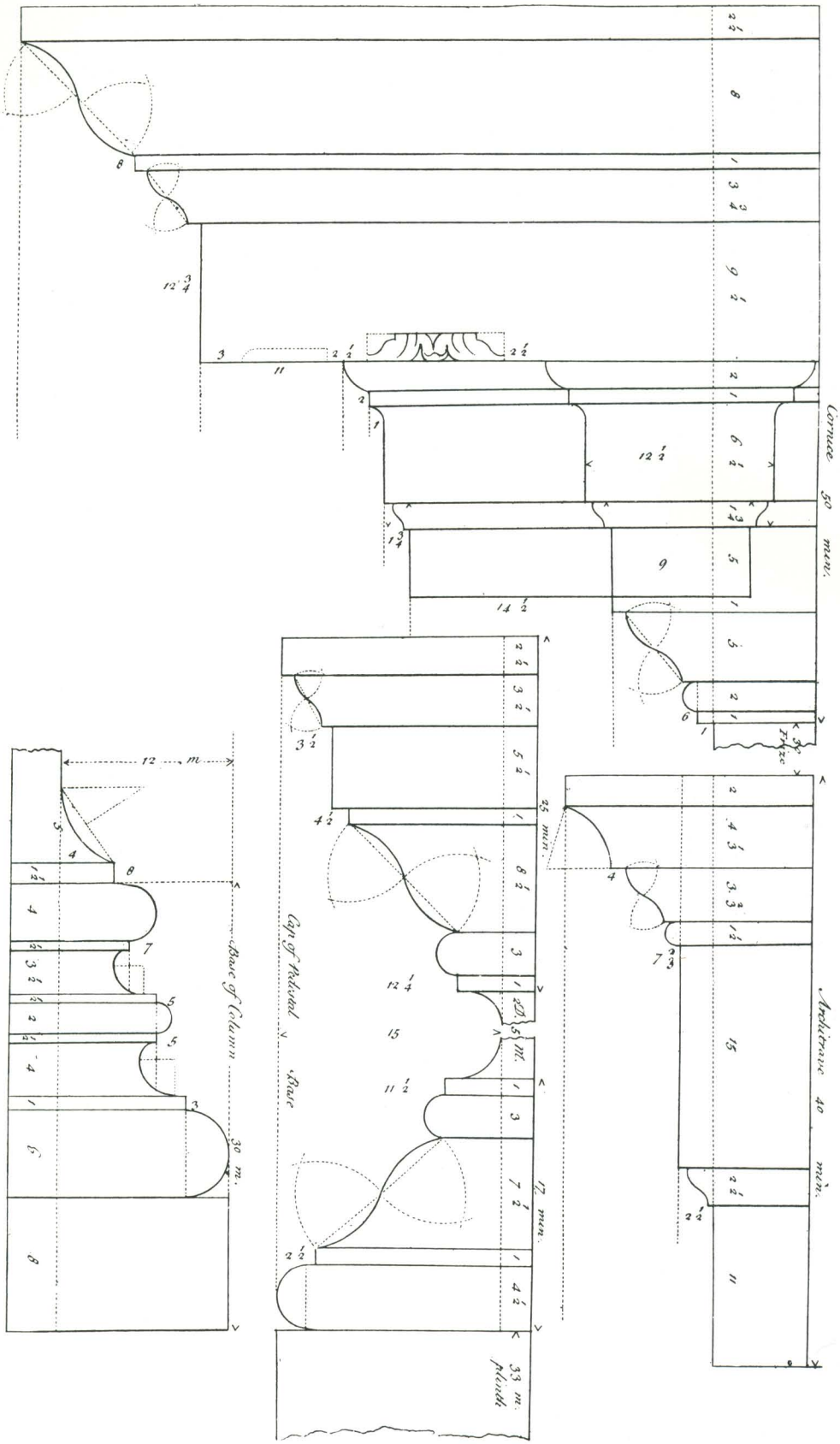

To proportion y^e Corinthian Column with its Pedestal and Entablature to any given Height: divide the Height a.b. into 14 parts each part is equal to one Diameter of the Column, which is to be divided into 60 parts or minutes, or the Diameter may be divided into 6 parts and one in ten for the Scale to work by, and those parts to be dispos'd to each member as they are figur'd in Height and projection: to proportion the Column with it's Subplinth, divide the Height e.f. into 25 parts each part is equal to 30 minutes or half the Diameter to proportion on its own Plinth divide the Height c.d. into 23 parts each part is 30 minutes.
2 Diam. 30 min
52 m. or 50
60 m.
7 m.
1 D. 24 m
1 D. 33 m.
Subplinth
25 parts, each part is equal to 30 minutes, and are is the Height of the Subplinth.
23 parts, each part is equal to 30 minutes.
19 parts or 1 Diameter
The Shaft of the Columns diminish from one third of their Height.
14 parts or Diameters.
2 Diam.

. Note when Pillasters are us'd with Columns their Shafts must have the same Diminution as the Columns, but when us'd alone they should Diminish but very little

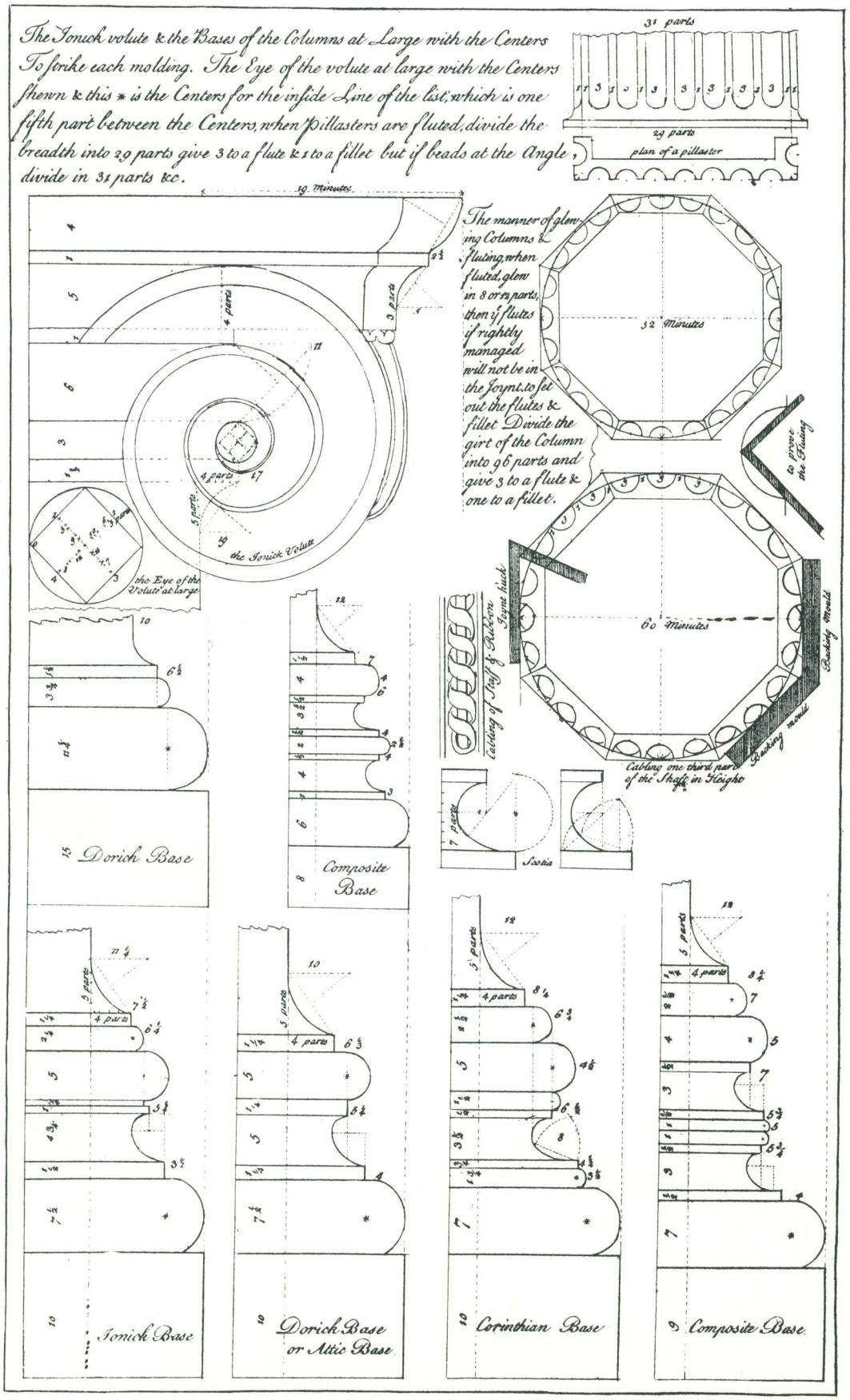
By true Inspection of the Scales and Figures the whole will be Plain and Intelligable to the meanest Capacity.

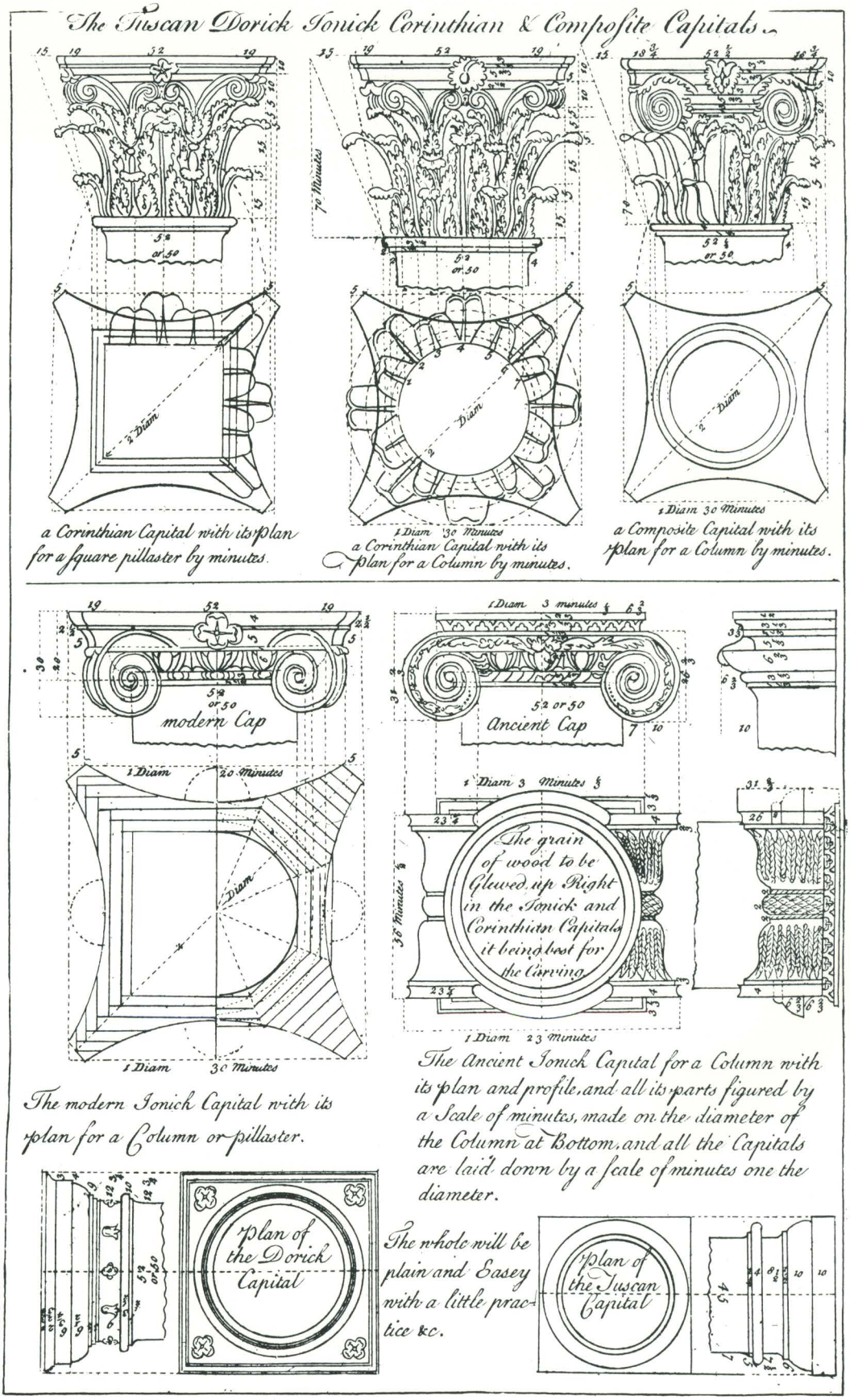
The Corinthian Order


The
Composite Order
To Proportion the Composite Column & Entablature with its Pedestal to any given height. Divide the height a. b. into 46 parts and 3 of them parts is equal to the Diameter of the Column, which is to be divided into 6 parts and one in ten as the Scale g. h and that is a Scale of minutes, which must be equal to the Diameter of the Column; and those minutes to be disposed to each member as they are figured in height and Projection.
To Proportion y Column with a Subplinth; divide the height e f into 13 parts and give one to the Subplinth; each part is equal to the Diameter of the Column; on its own plinth divide c d into 12 parts each part is a Diameter.
13 parts Each part is one Diameter which is the height of the Subplinth
12 parts or Diameters
30 parts or 10 diameters
46 parts Each part is Equal to 20 minutes or one third of the Diameter
6 parts or 2 Diam.
70 m
60 m
52½ or 50
1 Diam 24 m
3 Diameters 20 min.
10 parts
60 min
by true Inspection of the Scale and figures the whole will be plain

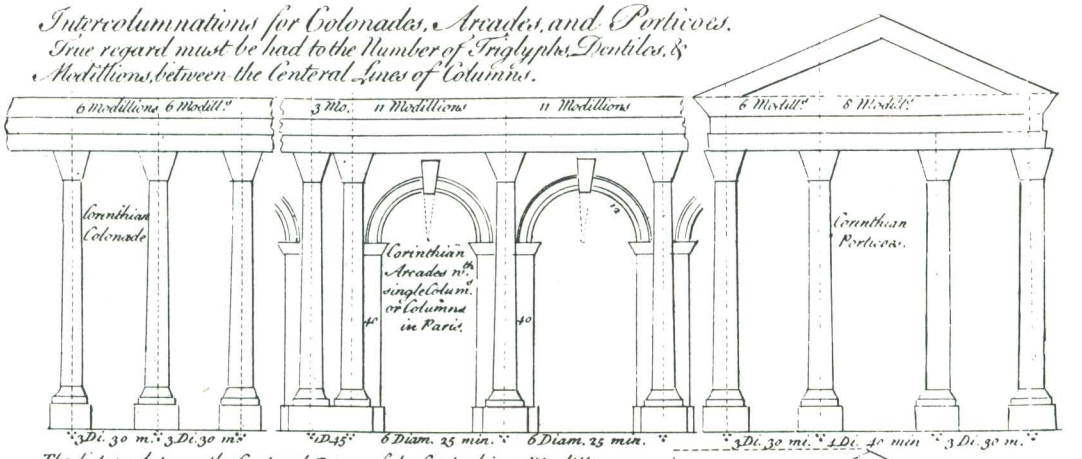


Mouldings at large for the Composite Order

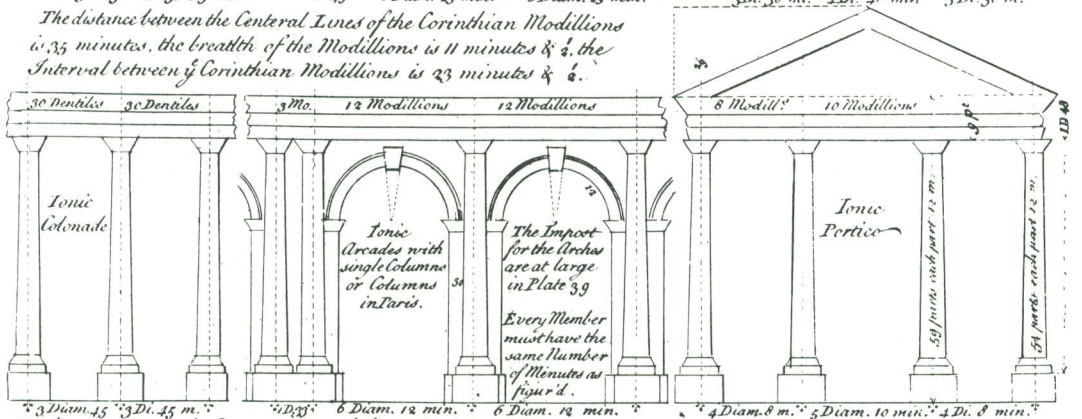

The Ionick volute & the Bases of the Columns at Large with the Centers To strike each molding. The Eye of the volute at large with the Centers shewn & this * is the Centers for the inside Line of the list, which is one fifth part between the Centers, when pillasters are fluted, divide the breadth into 29 parts give 3 to a flute & 1 to a fillet but if beads at the Angle divide in 31 parts &c.
31 parts
29 parts
plan of a pillaster
39 Minutes
the Ionick Volute
the Eye of the Volute at large
The manner of glowing Columns & fluting, when fluted, glow in 8 or 16 parts, then if flutes if rightly managed will not be in the Joynt. to set out the flutes & fillet Divide the girt of the Column into 96 parts and give 3 to a flute & one to a fillet.
32 Minutes
to prove the Fluting
60 Minutes
Backing mould
Cabling of Shaft & Ribbon
Joynt luck
Cabling one third part of the Shaft in Height
Scotia
15 Dorich Base
Composite Base
Ionick Base
Dorich Base or Attic Base
Corinthian Base
Composite Base


The Tuscan Dorick Ionick Corinthian & Composite Capitals
a Corinthian Capital with its plan for a square pillaster by minutes.
1 Diam 30 Minutes
a Corinthian Capital with its plan for a Column by minutes.
1 Diam 30 Minutes
a Composite Capital with its plan for a Column by minutes.
modern Cap
1 Diam 20 Minutes
1 Diam 30 Minutes
The modern Ionick Capital with its plan for a Column or pillaster.
Ancient Cap
1 Diam 3 Minutes
The grain of wood to be Glued up Right in the Ionick and Corinthian Capitals it being best for the Carving
1 Diam 23 Minutes
The Ancient Ionick Capital for a Column with its plan and profile, and all its parts figured by a Scale of minutes, made on the diameter of the Column at Bottom, and all the Capitals are laid down by a scale of minutes one the diameter.
plan of the Dorick Capital
The whole will be plain and Easey with a little practice &c.
plan of the Tuscan Capital

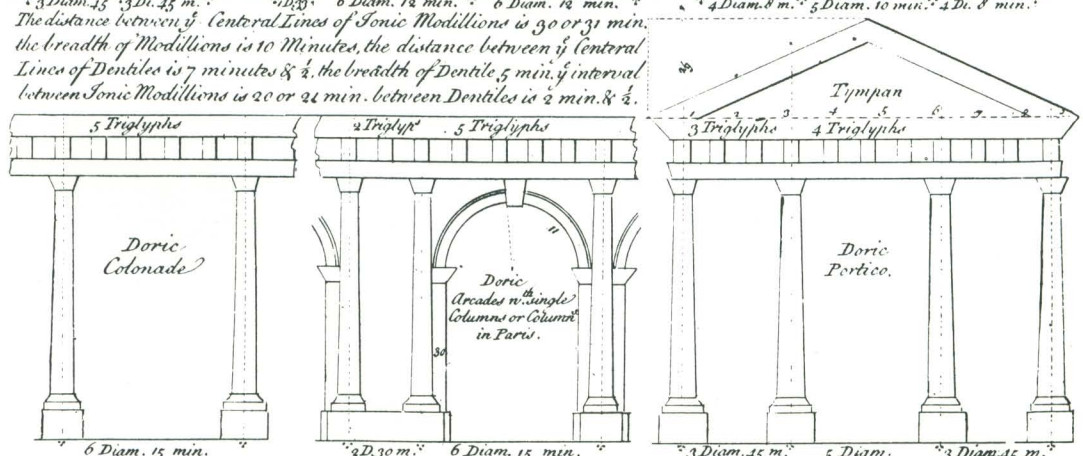
Intercolumnations for Colonades, Arcades, and Portices.
True regard must be had to the Number of Triglyphs, Dentiles, & Modillions, between the Centeral Lines of Columns.



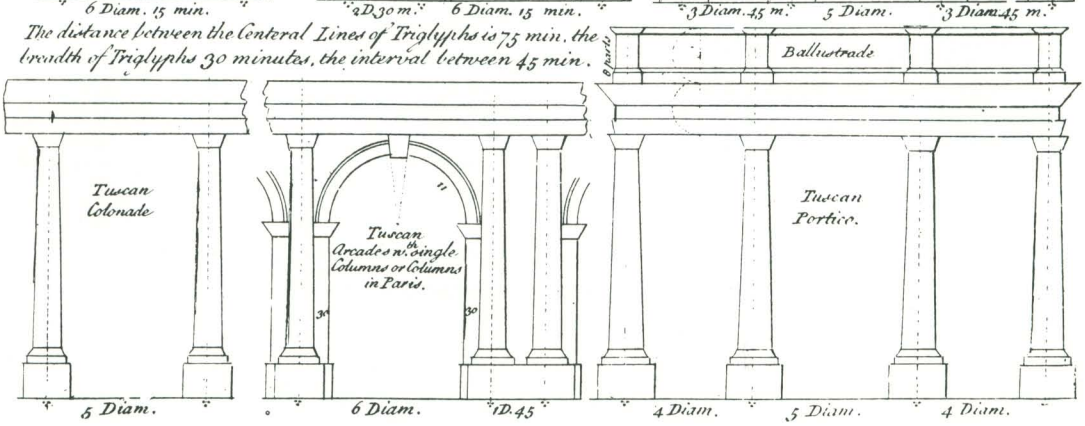
The distance between the Centeral Lines of the Corinthian Modillions is 35 minutes, the breadth of the Modillions is 11 minutes & ½, the Interval between y.e Corinthian Modillions is 23 minutes & ½.

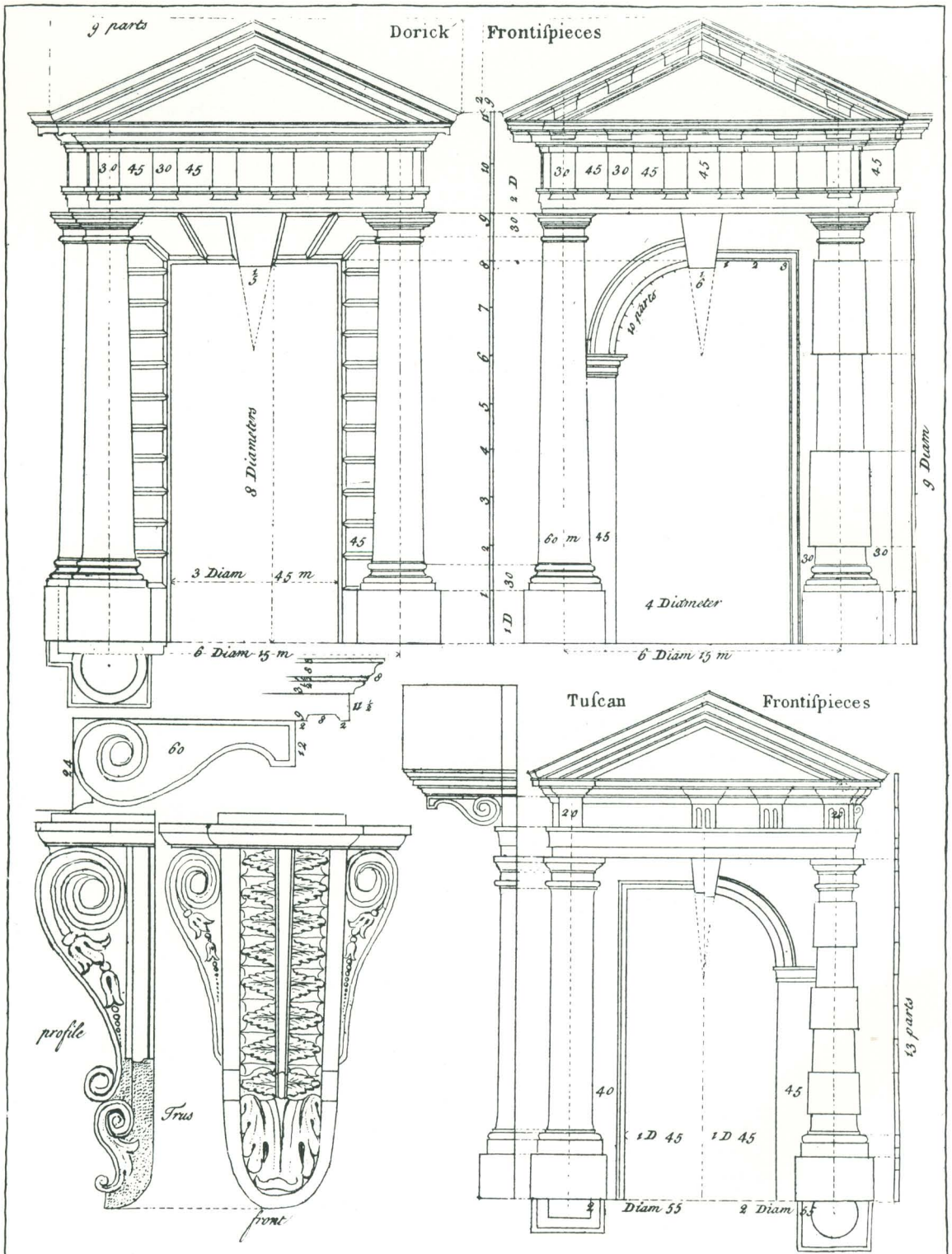

30 Dentiles 30 Dentiles
3 Mo. 12 Modillions 12 Modillions
8 Modill.s 10 Modillions
Ionic Colonade
Ionic Arcades with single Columns or Columns in Paris.
The Impost for the Arches are at large in Plate 39
Every Member must have the same Number of Minutes as figur'd.
Ionic Portico
3 Diam. 45
3 Di. 45 m.
1 D. 35
6 Diam. 12 min.
6 Diam. 12 min.
4 Diam. 8 m.
5 Diam. 10 min.
4 Di. 8 min.

The distance between y.e Centeral Lines of Ionic Modillions is 30 or 31 min. the breadth of Modillions is 10 Minutes, the distance between y.e Centeral Lines of Dentiles is 7 minutes & ½, the breadth of Dentile 5 min. y.e interval between Ionic Modillions is 20 or 21 min. between Dentiles is ½ min. & ½.

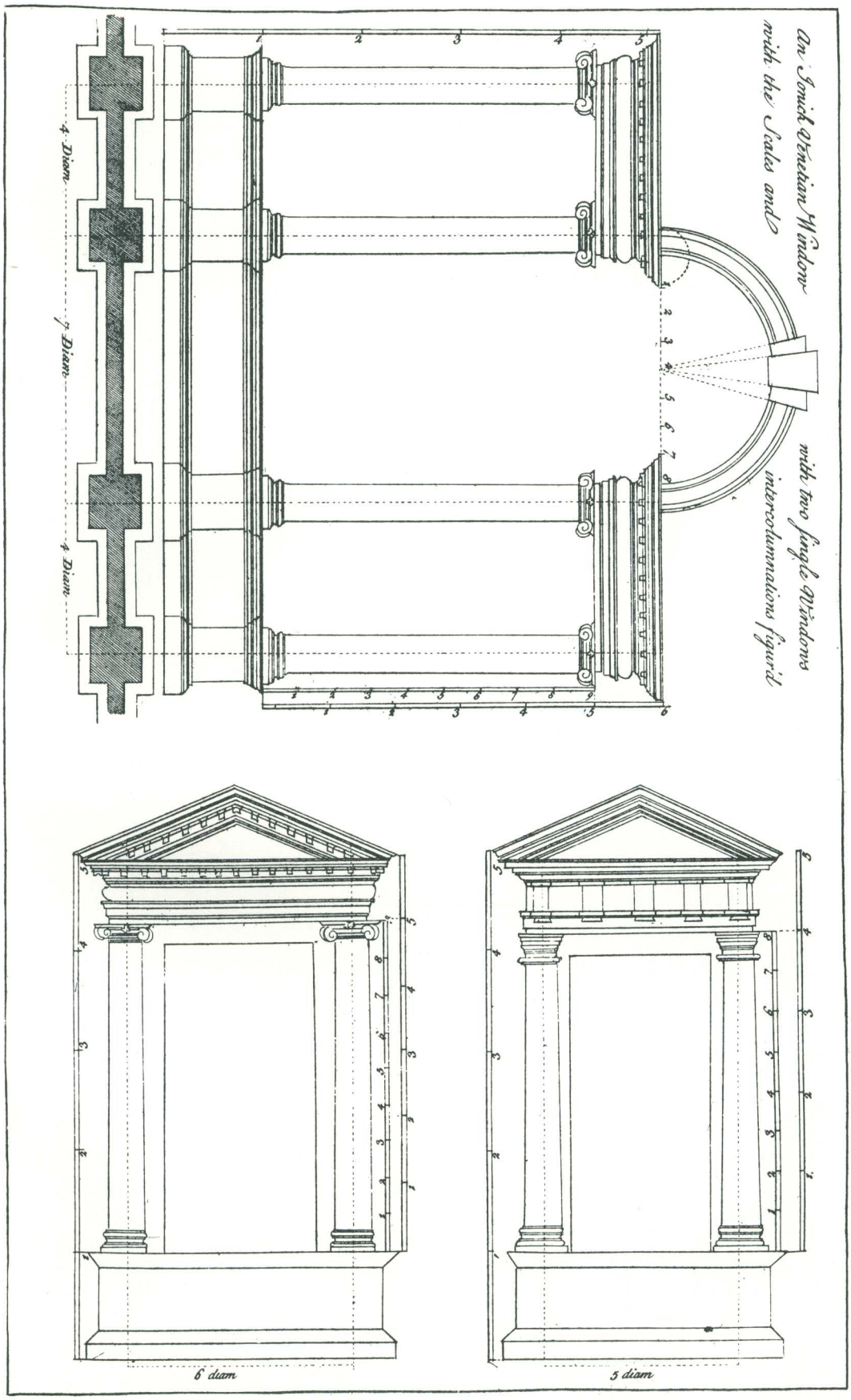


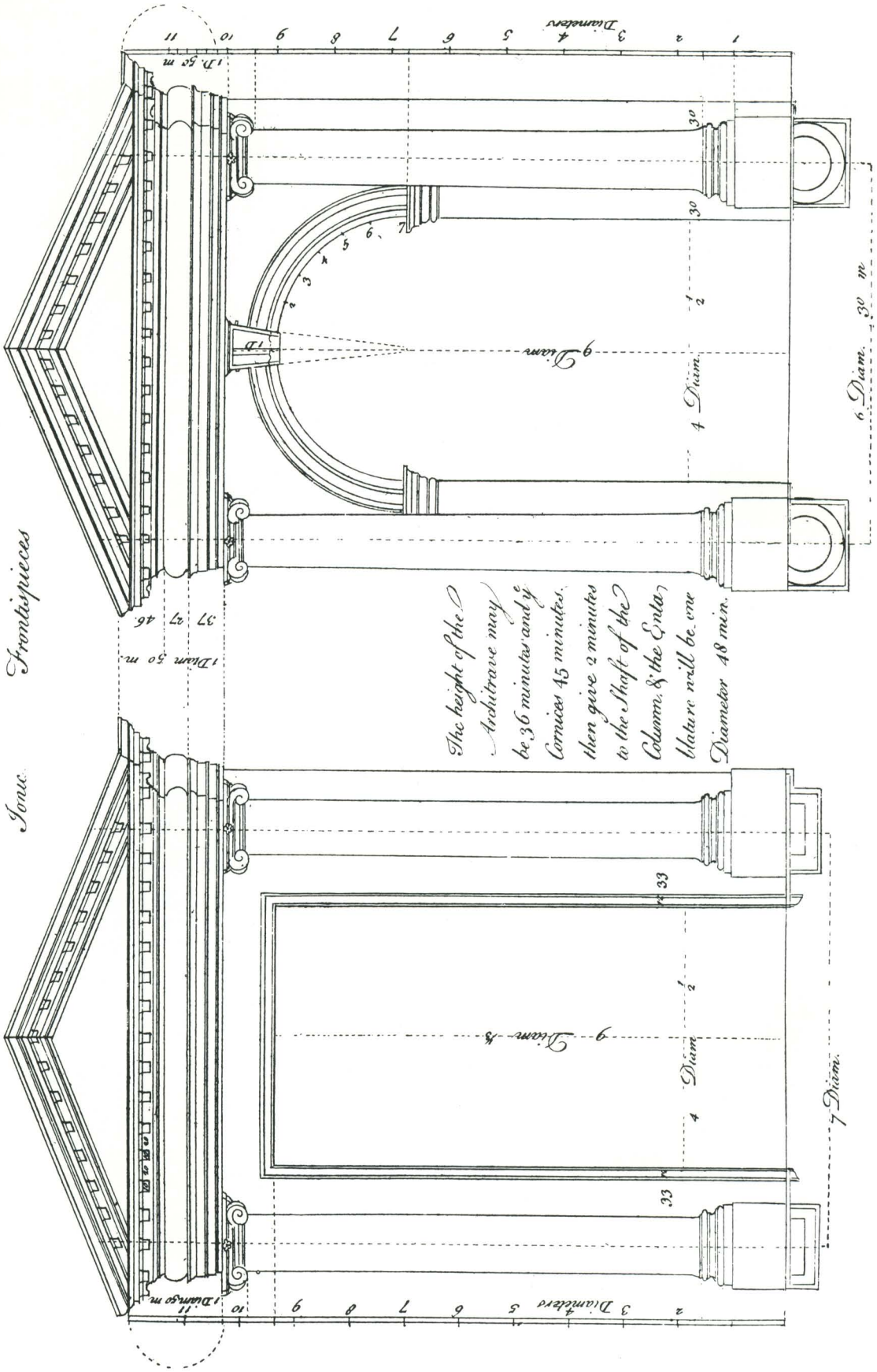
The distance between the Centeral Lines of Triglyphs is 75 min. the breadth of Triglyphs 30 minutes, the interval between 45 min.

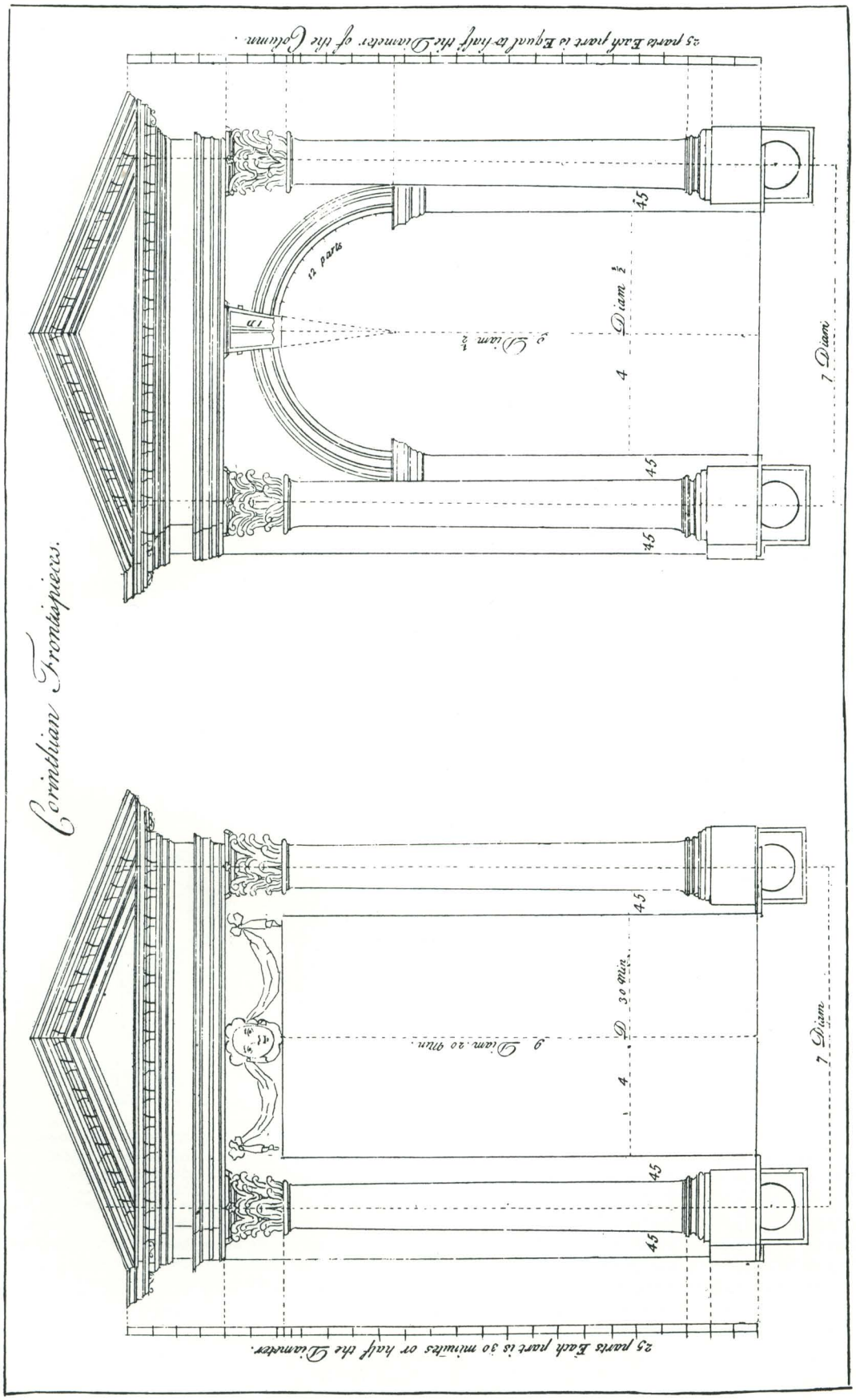


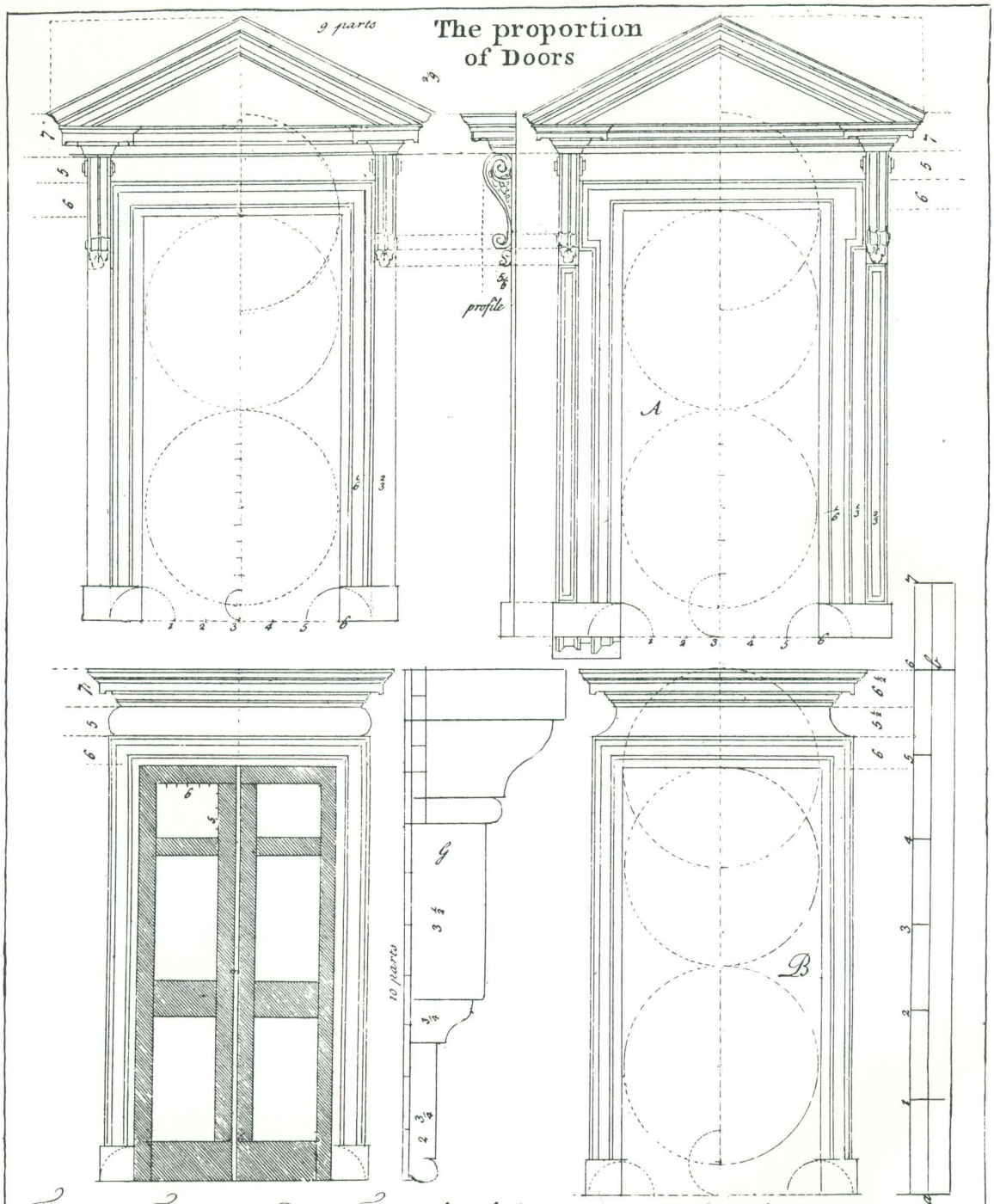


Sketches of Tuscan & Dorick Frontispieces; two Circular headed & three Square headed: all the parts are plain by the scales & figures the Bases, Caps and Entablatures at Large in pages 32 33 · —— a Frus for to set a Busto on.

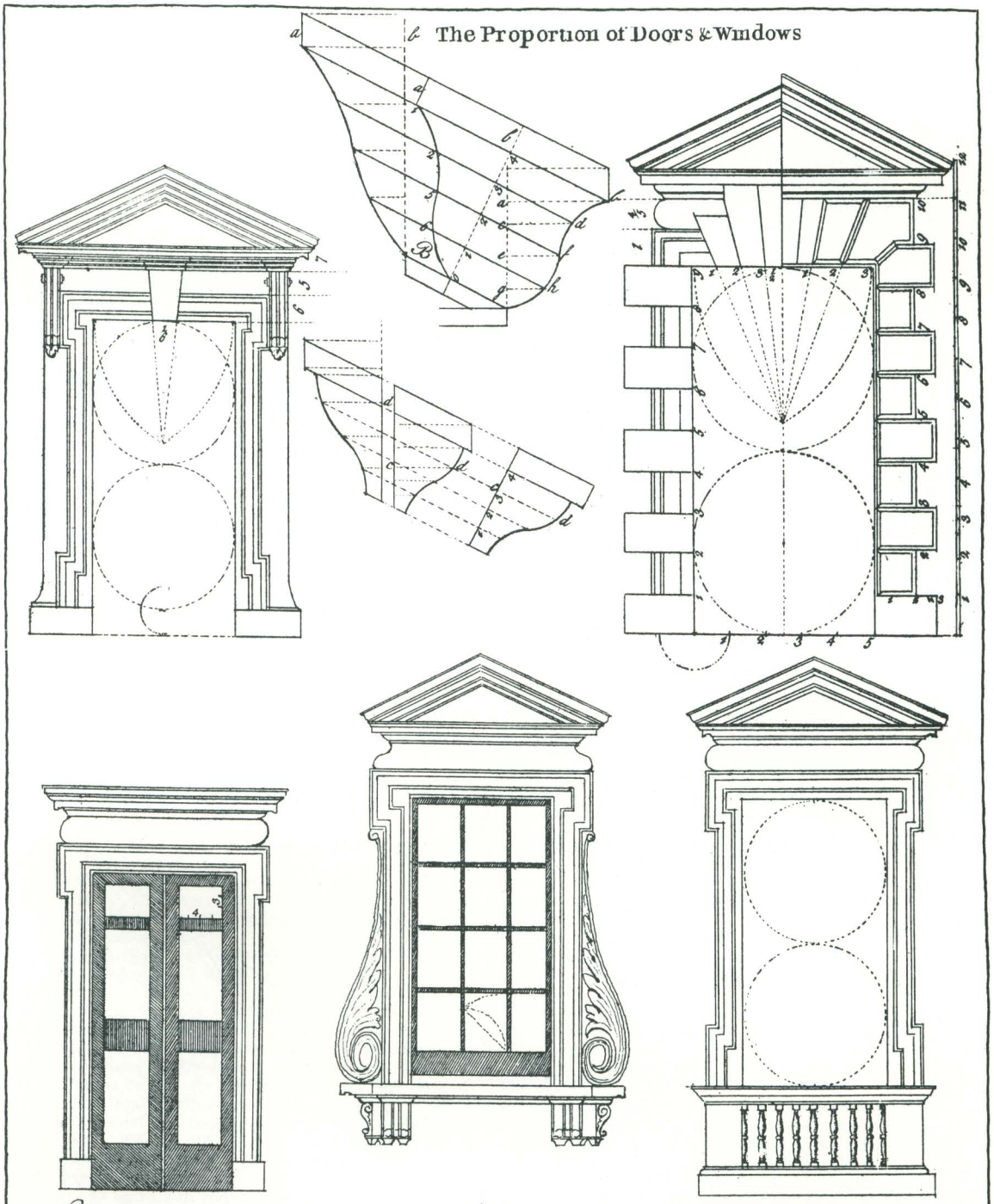

An Ionick Venetian Window
with the Scales and
with two Single Windows
intercolumnations figur'd
4 Diam
7 Diam
4 Diam
6 diam
5 diam


Ionic Frontispieces
Diameters
1 Diam. 50 m.
37 27 46
9 Diam.
4 Diam.
6 Diam. 30 m.
The height of the Architrave may be 36 minutes and ye Cornice 45 minutes. then give 2 minutes to the Shaft of the Column, & the Entablature will be one Diameter 48 min.
9 Diam. 8
4 Diam.
7 Diam.
33
33
Diameters
1 Diam. 50 m.

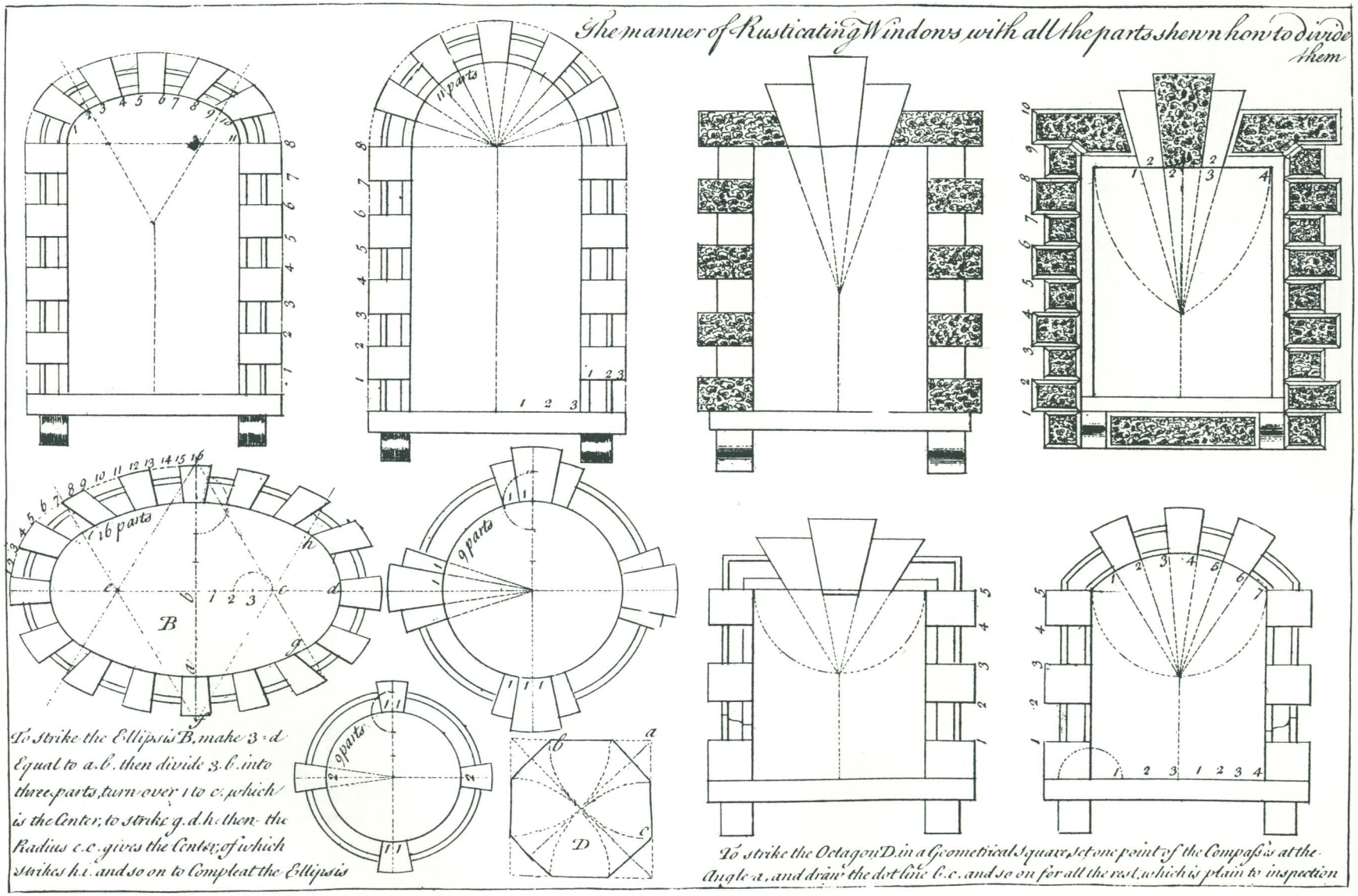

Corinthian Frontispieces.
25 parts Each part is 30 minutes or half the Diameter.
9 Diam. 10 min.
D 30 min.
4
45
45
7 Diam
25 parts Each part is Equal to half the Diameter of the Column.
9 Diam ½
D Diam ½
4
45
45
7 Diam



To proportion Frontispieces to Doors. That mark'd A divides the opening or width of the door into six parts, give one to the Architrave, then divide the Architrave into three parts, give one to the knee of the Architrave and two to the open pillaster, then for the height of the Architrave, frize and Cornice which is half the width of the opening of the door, this is plain by Circles the frize and Cornices take their parts from the Architrave. Suppose the Scale a . b to be the width of the Architrave G. which must allways be divided into Six parts, then give five of them parts to the frize and Seven to the Cornices as they are figured, or five and a half to the frize and six and a half to the Cornices as that of B. The height of the opening is two diameters one Sixth or two diameters one twelfth and the Rest will be plain to inspection &c. The length of the knee, twice the Architrave breadth. the profile of the truss is of the Architraves breadth or equal to the breadth of the Architrave.



The manner of Striking Raking Cornices as at B. divide the height of the Raking mold 0.4 into four equal parts, and draw the lines parallel with the Raking, then make the projections all equal as a b. then take the projections from the Level Cornices as a.b.c.d.e.f.g.h; set them on the Raking molding as a b.4 1.3 2. 2 5.1 6 that will give the Curve of the molding, and for upper Returnid molding, Set on the same parts square from the Back, to meet the Raking Lines. and that will be the Curve of the Returnid molding, then at those points tack in Nails, and Bend a thin slip to the Nails, and mark it by, that will be the Curve Line or faces of the mouldings q.t hear is three doors and two windows which is plain by the parts and figures.—— The Length of the knee twice the Breadth of the Archatrave for y.e margents of doors divide the width of the door into 9 parts and give one to the margent and the Bottom Raile and Lock Raile double the margent.


The manner of Rusticating Windows with all the parts shewn how to divide them
11 parts
16 parts
9 parts
9 parts
B
D
To Strike the Ellipsis B, make 3 d Equal to a.b. then divide 3.b. into three parts, turn over 1 to c. which is the Center, to strike g.d.h. then the Radius c.c. gives the Center, of which strikes h.i. and so on to Compleat the Ellipsis
To strike the Octagon D. in a Geometrical Square, Set one point of the Compass is at the Angle a, and drain the dot line b.c. and so on for all the rest, which is plain to inspection

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AND

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By *WILLIAM PAIN*, Architect and Joiner.

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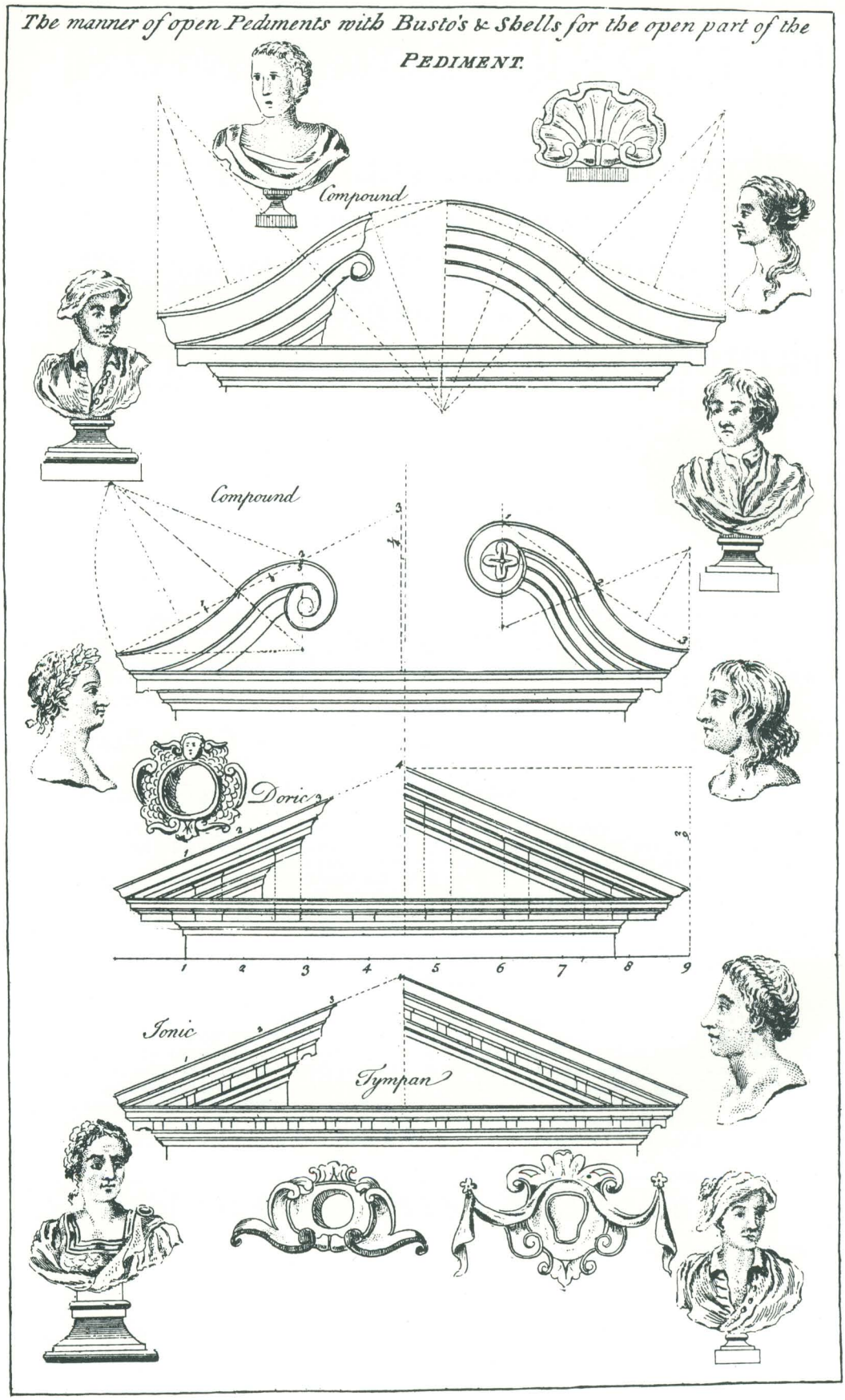
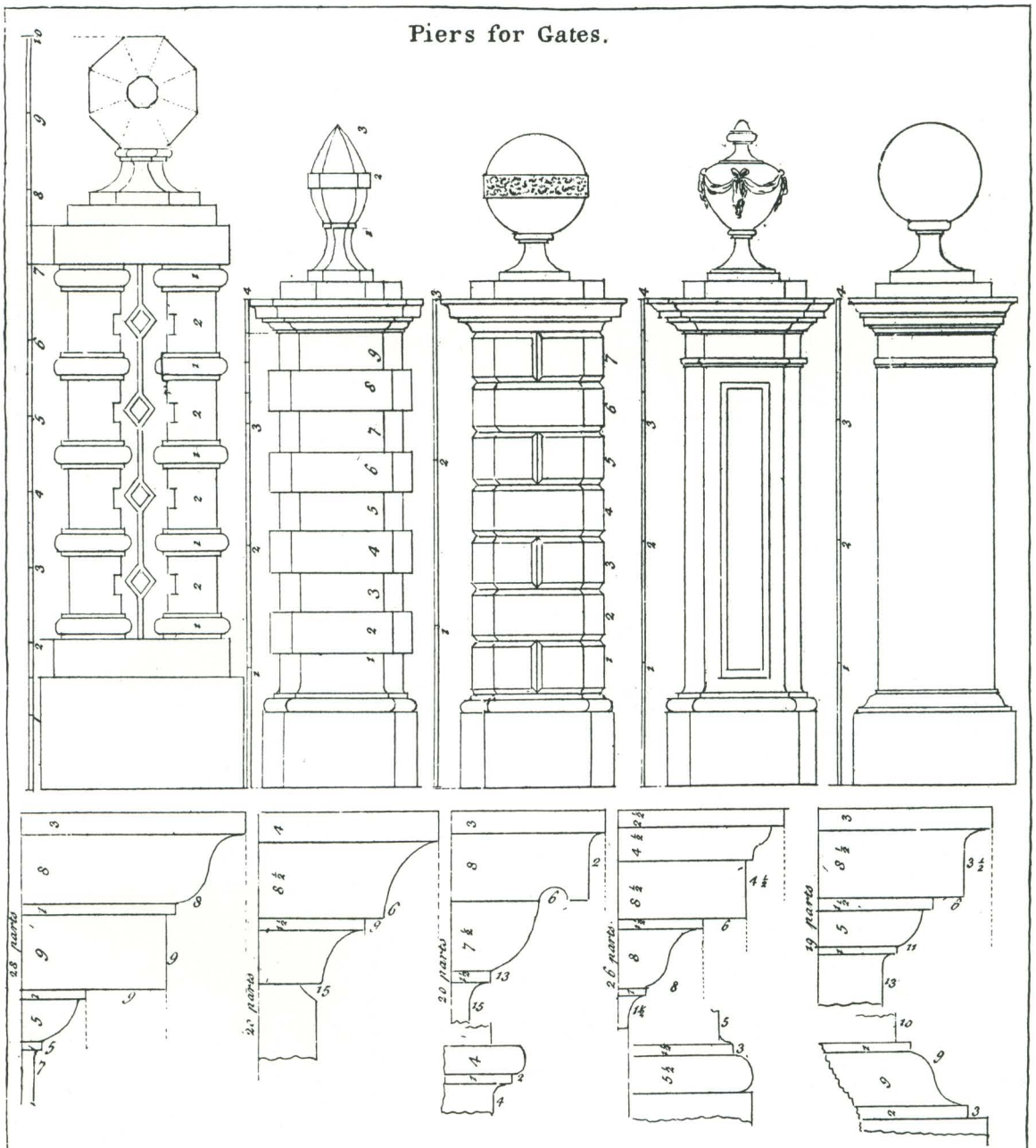
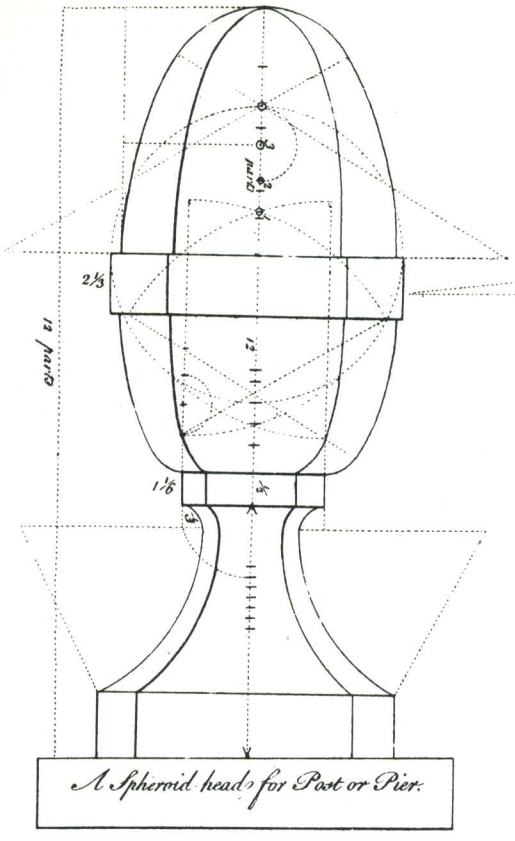
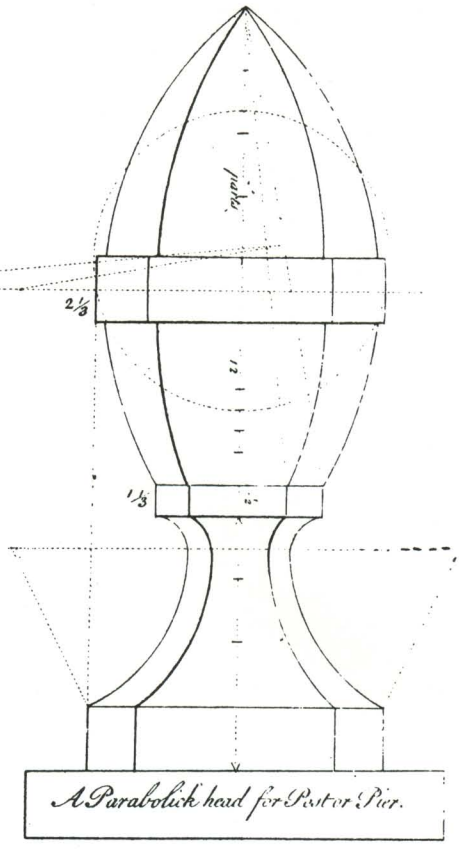
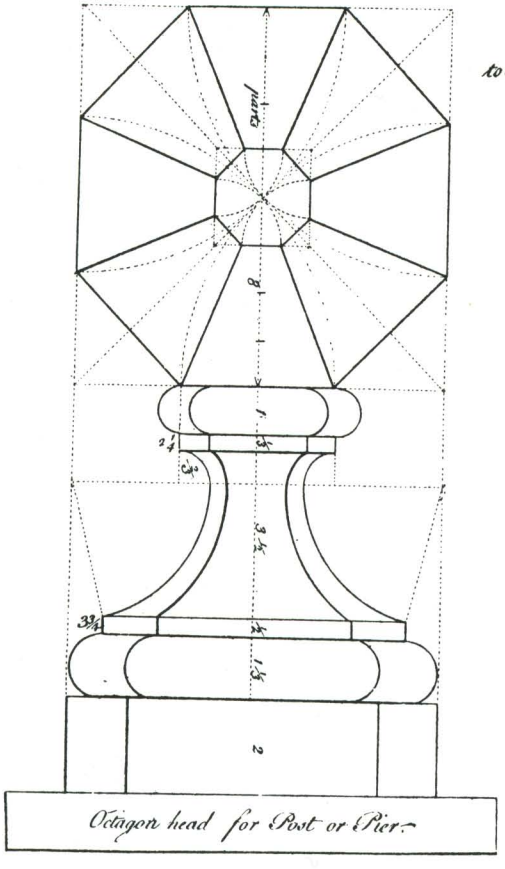

The manner of open Pediments with Busto's & Shells for the open part of the
PEDIMENT.
Compound
Compound
Doric
Ionic
Tympan



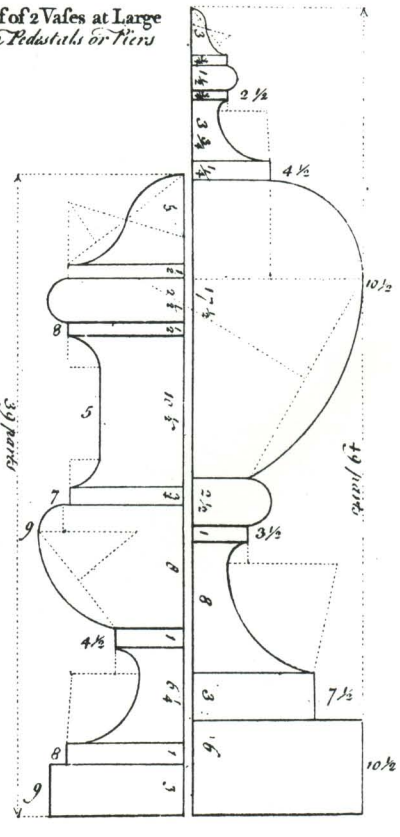
Five piers for Gates with Scales and proportions for the Bases and Cornices of the piers the height of Each Cornice to be divided into as many parts as is figur'd at the Back of Each Cornice and these parts disposed to Each member as they are figur'd in height & projection The height of the Balls and Vaes above the Cornices may be one third of the height of the piers or one fourth of the piers height by the Scales up the side of the piers and the height of the Cornices to be one sixteenth part of the piers height &c. the height of plinths is two thirteenths of the piers height.



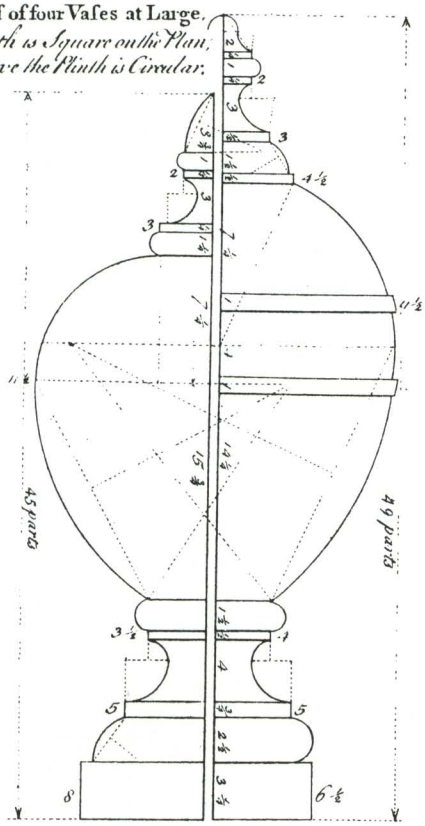


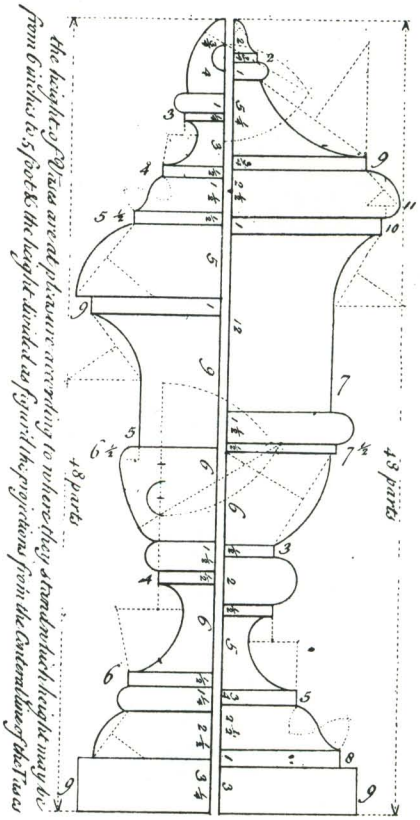


The half of 2 Vases at Large
to Stand on Pedestals or Piers



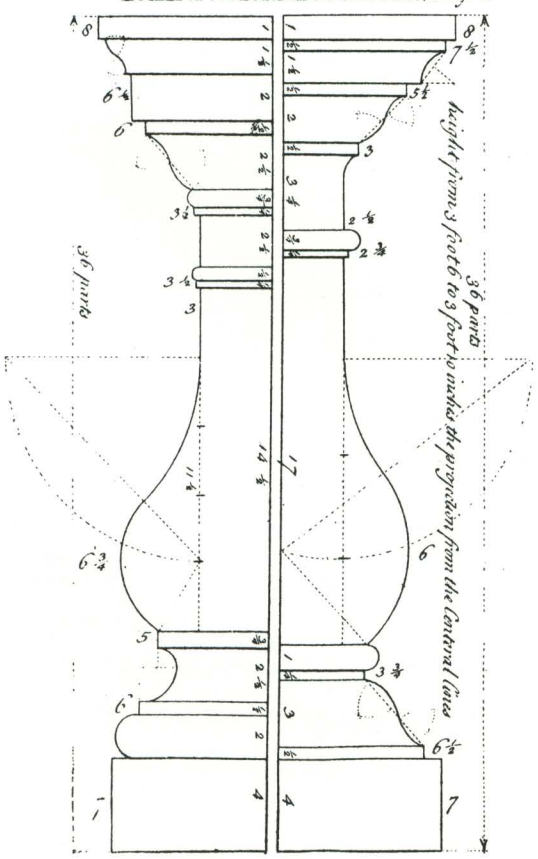
the half of four Vases at Large,
the Plinth is Squarr on the Plan,
all above the Plinth is Circular.



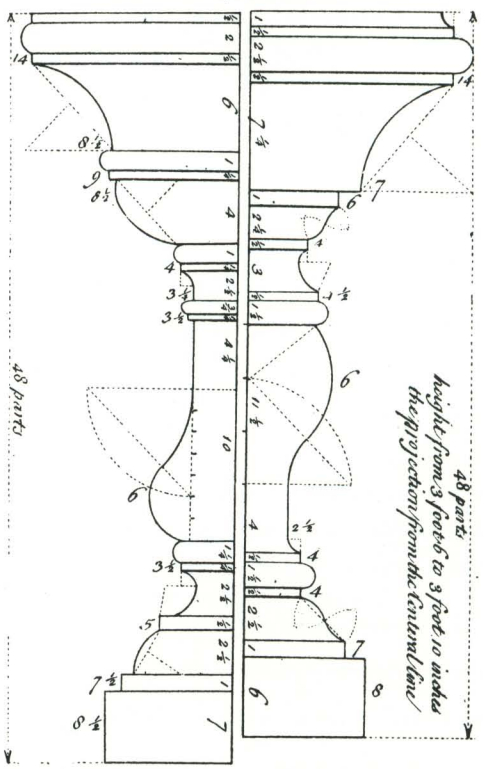


the heights of Vazes are at pleasure according to where they stand but such height may be from 6 inches to 5 foot & the height divided as figured the projections from the Centerline of the Vase

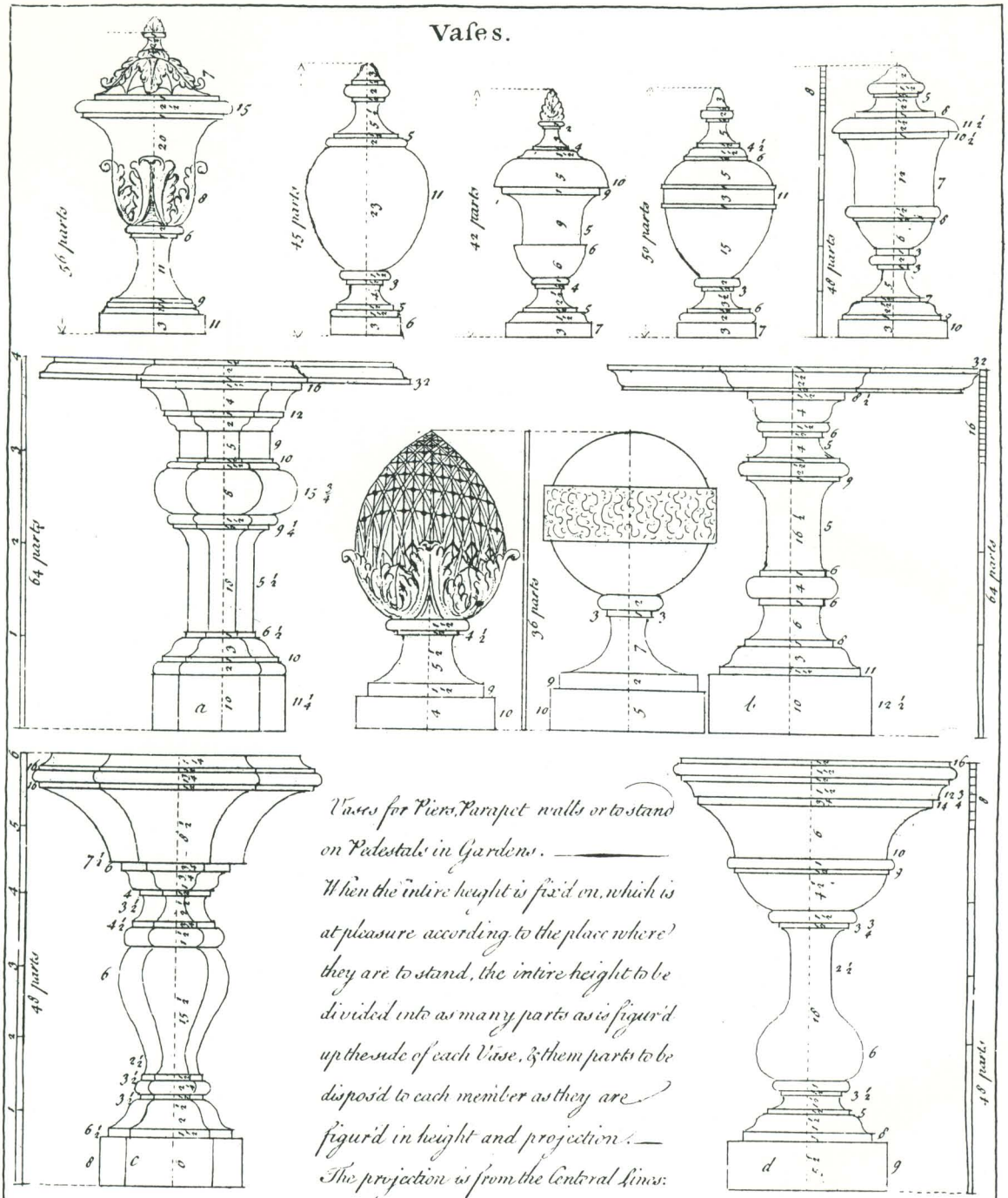
the half of two Pedestals for Sun Dials, *to Page 18*

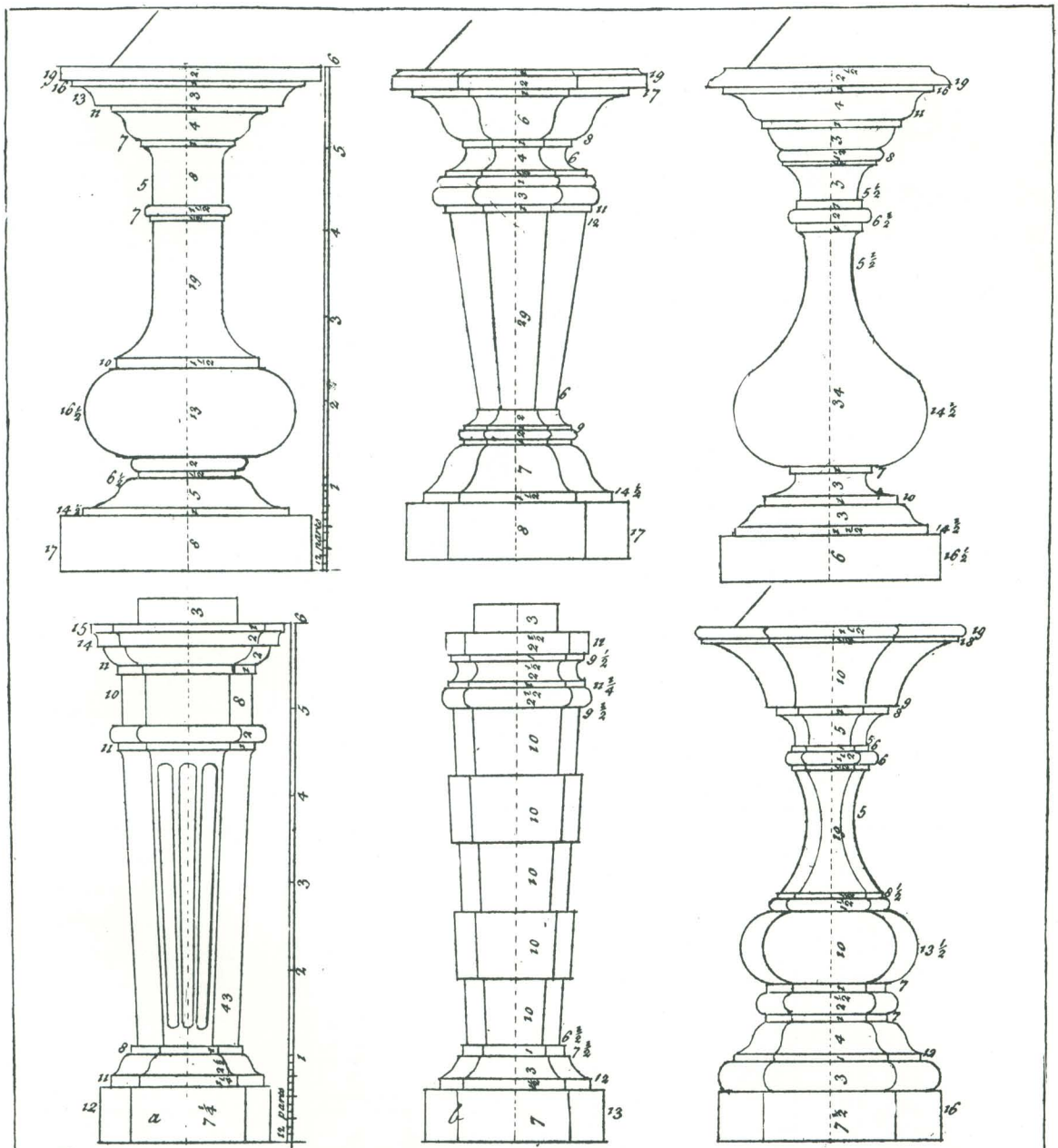


the half of two Fonts for Churches



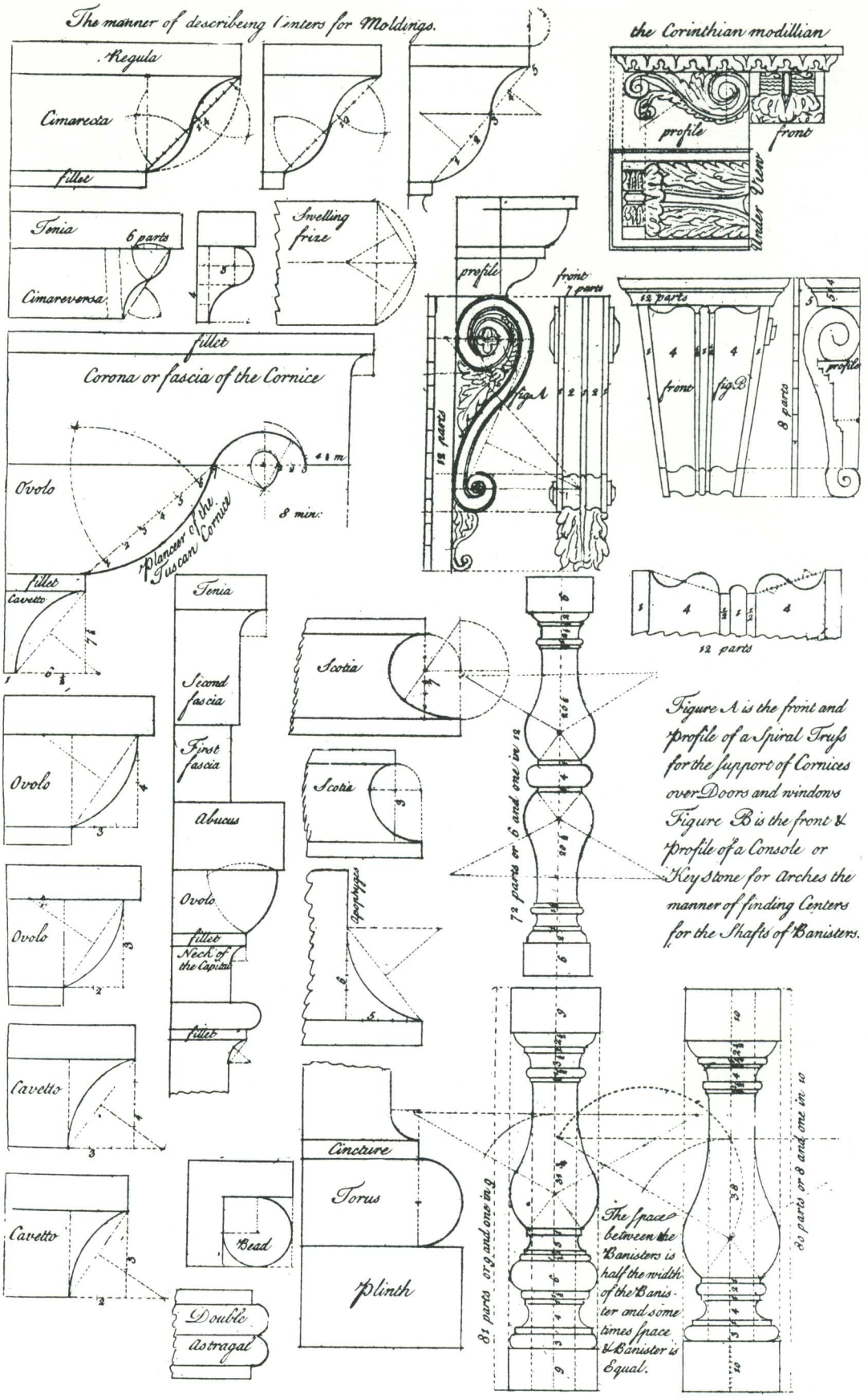
the plans may be Circular or Octagon at pleasure


Vases.
56 parts
45 parts
42 parts
50 parts
48 parts
64 parts
36 parts
a
b
c
d
Vases for Piers, Parapet walls or to stand on Pedestals in Gardens.
When the intire height is fix'd on, which is at pleasure according to the place where they are to stand, the intire height to be divided into as many parts as is figur'd up the side of each Vase, & them parts to be disposed to each member as they are figur'd in height and projection.
The projection is from the Centeral Lines.
a. and b. are two Stone Tables for Gardens or Grotto's, the given heights may be from 2 foot 4 inches to 2 foot 6 inches, and the heights to be divided into 64 parts or into 4 and one in 16 parts, and them parts disposed to each Member as they are figur'd in height and projection. c. and d. are two Fonts for Churches & the height may be from 3 foot 6 inches to 3 foot 10 inches & to be divided into 48 parts, & them parts to be disposed to each Member as they are figur'd in height & projection, the projection is from the Centeral Lines, &c.

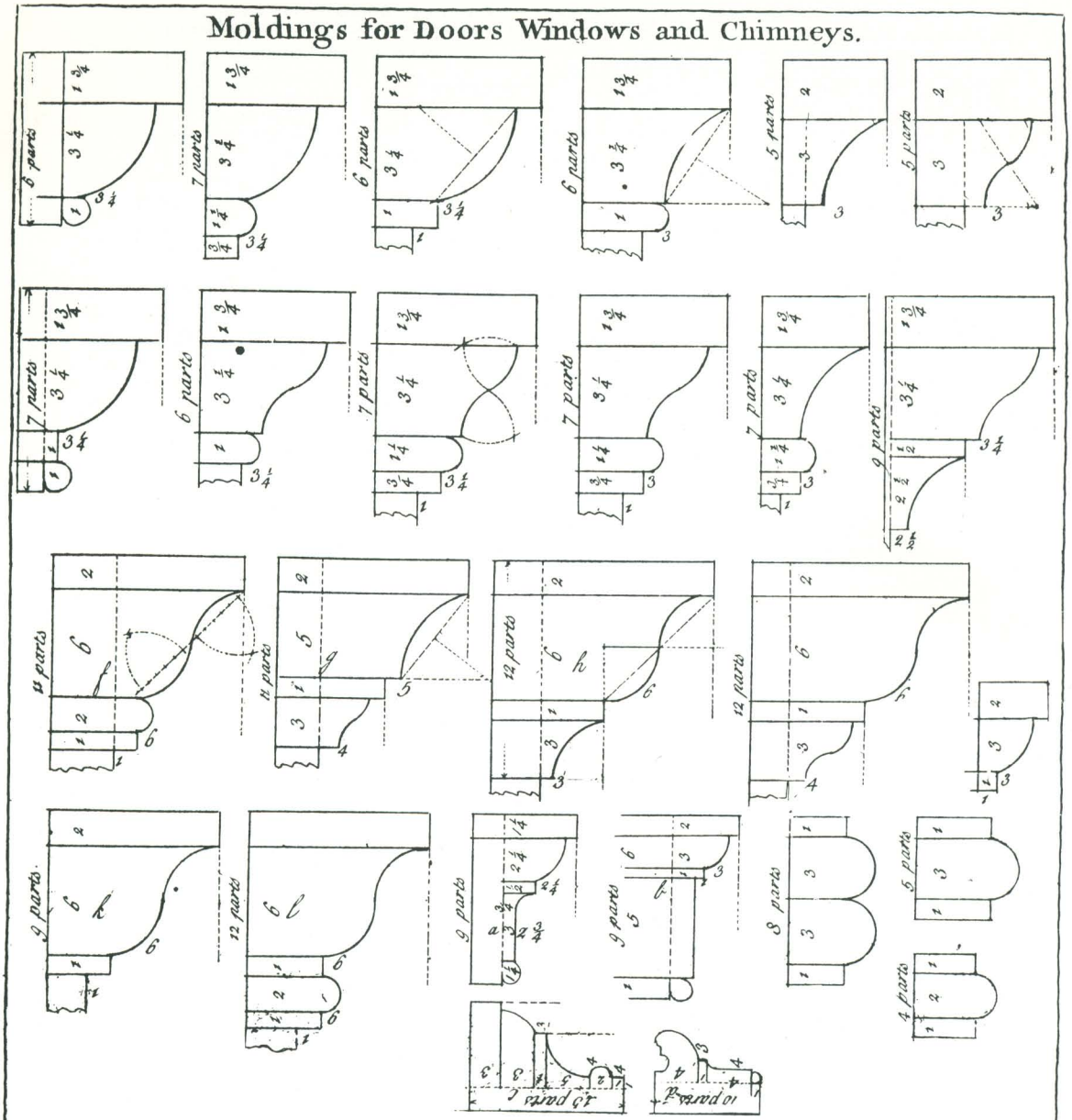


Four Pedestals for Sun Dials. The heights may be from three foot ten Inches to four foot, and that height to be divided into six parts, one of which parts is to be divided into twelve parts, and those parts to be disposed to each member as they are figured in height and projection. The projections are all set from the Centeral Lines, a and b. is two Pedestals for Bustos: Proportion by the same Ruls the heights from four to five foot, and the parts to be disposed to each member as they are figurd in height and projection.

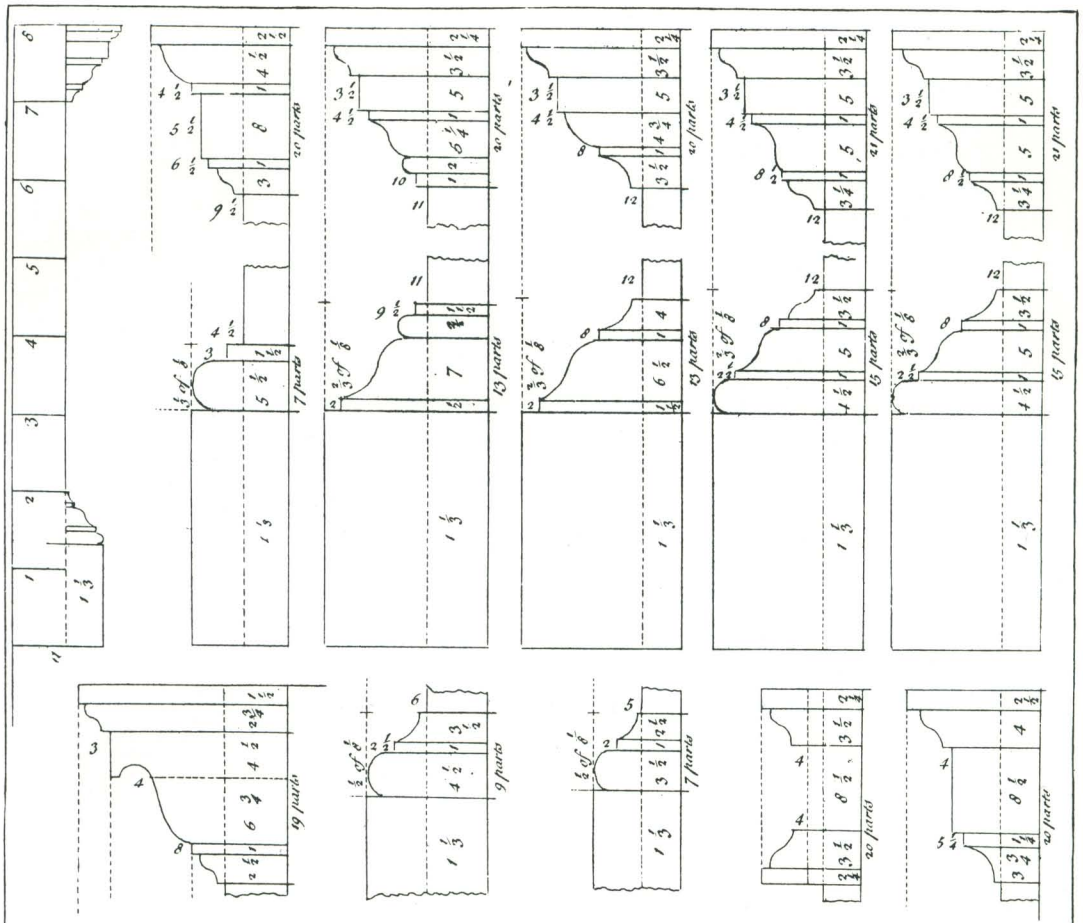
Pedestals for Sun-Dials and Bustos


The manner of describeing Centers for Mouldings.
Regula
Cimarecta
fillet
Tenia
6 parts
Cimareversa
Swelling frize
fillet
Corona or fascia of the Cornice
Ovolo
Planceer of the Tuscan Cornice
8 min:
fillet
Cavetto
Tenia
Second fascia
First fascia
Abucus
Ovolo
fillet
Neck of the Capital
fillet
Ovolo
Ovolo
Cavetto
Cavetto
Bead
Double Astragal
Cincture
Torus
Plinth
Scotia
Scotia
Cordelier
the Corinthian modillian
profile
front
Under View
profile
front
7 parts
fig A
12 parts
12 parts
front
fig B
8 parts
profile
12 parts
72 parts or 8 and one in 18
Figure A is the front and profile of a Spiral Truss for the support of Cornices over Doors and windows Figure B is the front & profile of a Console or Keystone for Arches the manner of finding Centers for the Shafts of Banisters.
81 parts or 9 and one in 9
The space between the Banisters is half the width of the Banister and sometimes space & Banister is Equal.
80 parts or 8 and one in 10

The proportion of Cornices & margents to Rooms.
These four Scales Shew ye manner of proportion for the Pedestal parts of Rooms and the proportion for Cornices to Rooms by four different ways.
This proportion for Cornices will do for any place requir'd. let the height of ye Rooms or Buildings be what they will & the same Rules will do for the Dado or Pedestal part of Rooms as they are here shewn.
For the proportion of margents Divide ye height of the Room into 30 parts and give one to the margent
margent
Margent
margent
Margent
margent

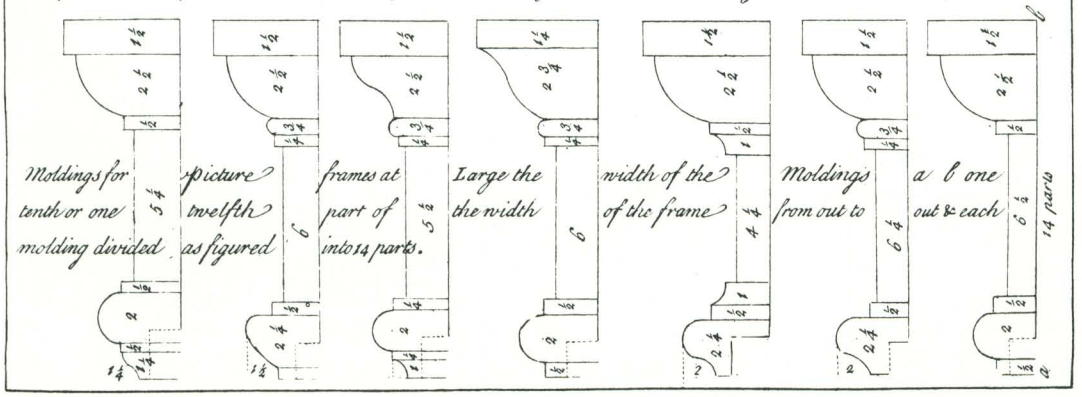


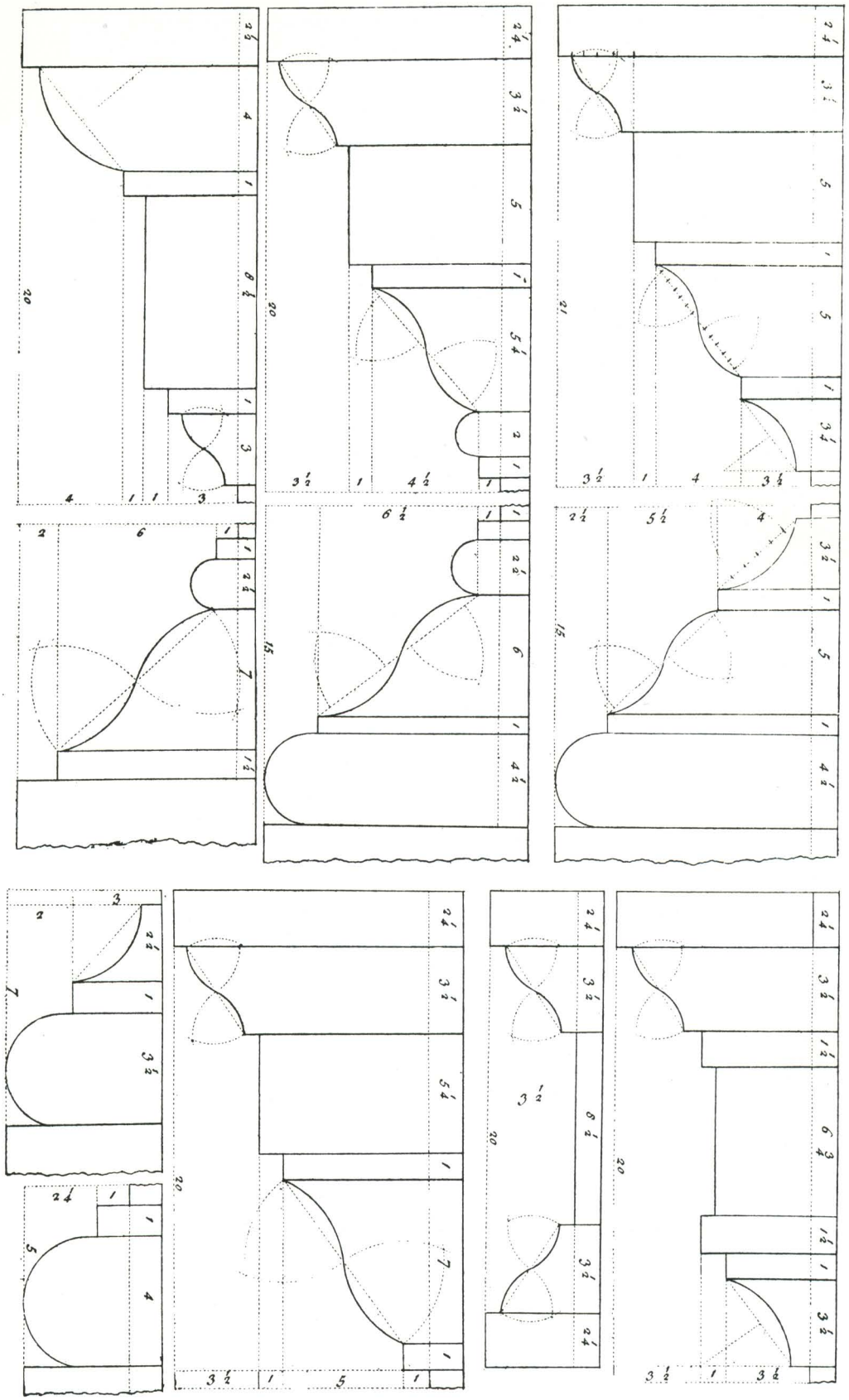
Moldings for Doors, Windows or Chimney pieces & Cornices, with the parts figured in height and projection. When the breadth or Bigness of the Moldings is agreed on which may be from one inch to three Inches, and them marked a.b.c.d. the breadths may be from three Inches to six Inches, and the Cornices marked f.g.h.i.k.l. the breadths or heights, may be from two Inches to six Inches: the breadth or height to be divided into as many parts as is figured at the Back of Each molding, & dispose the same parts to the projections of Each molding &c.



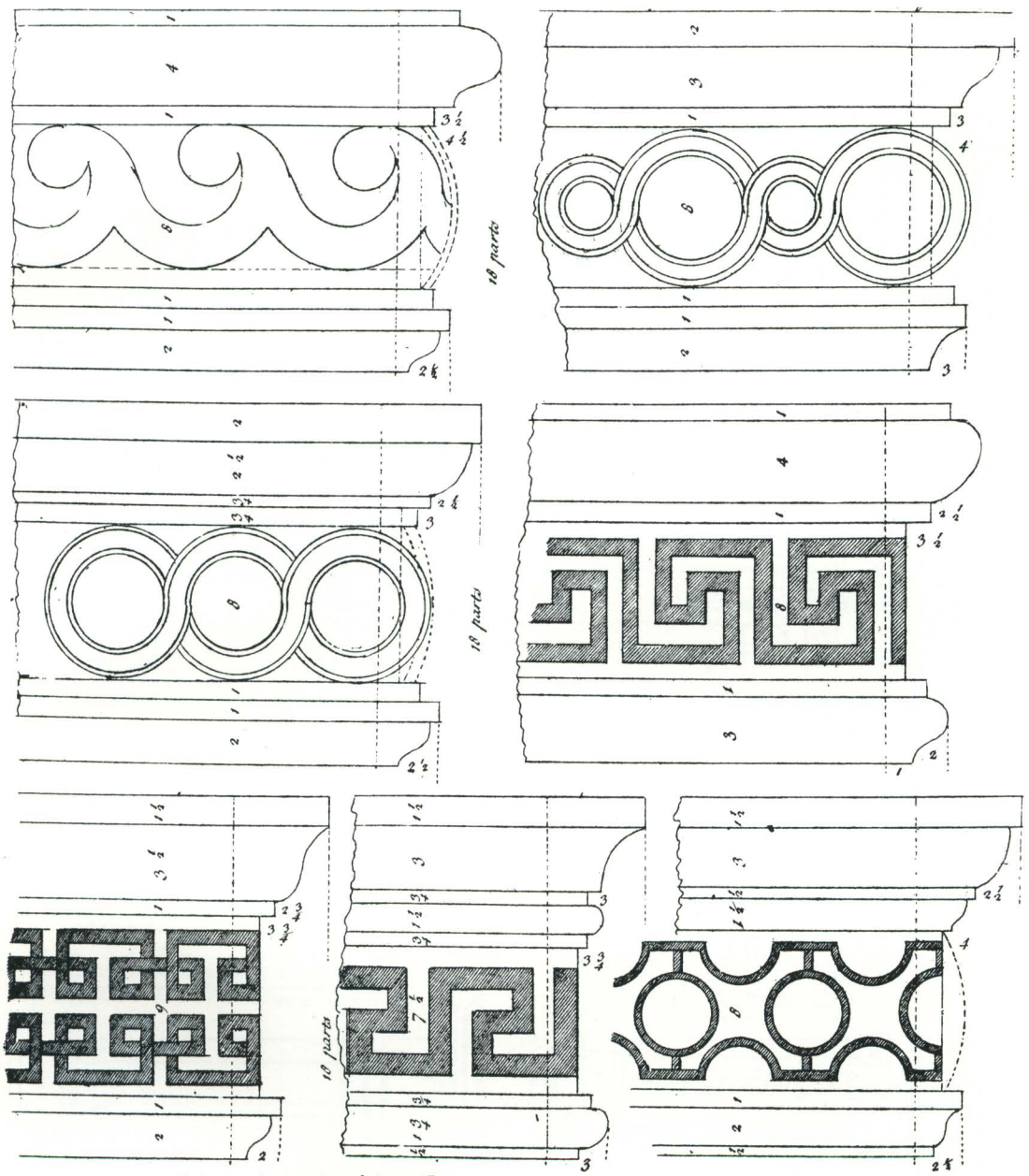
Moldings for the pedestal part of Rooms.

To proportion the Base and Cornices to the Pedestal part of Rooms. Suppose a. b. to be a given Height of the Pedestal part of the Room, and that Height always to be divided into eight parts and give one, and one third to the height of the Plinth, and two thirds to the Base Molding, and one eighth part to the Cap or Cornices of the Pedestal; and the height of the Base and Cornices, to be divided into as many parts as is figur'd at the back of each Molding; and them parts to be dispos'd to each member in height and projection as they are figur'd; the height from two foot eight Inches to three foot.

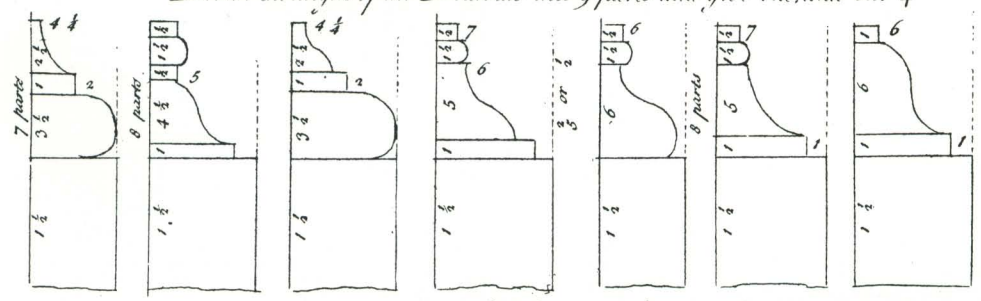

Moldings for tenth or one molding divided
picture twelfth as figured
frames at part of into 14 parts.
Large the the width
width of the of the frame
Moldings from out to
a b one out & each
14 parts



Mouldings at large for the Pedestal parts of Rooms

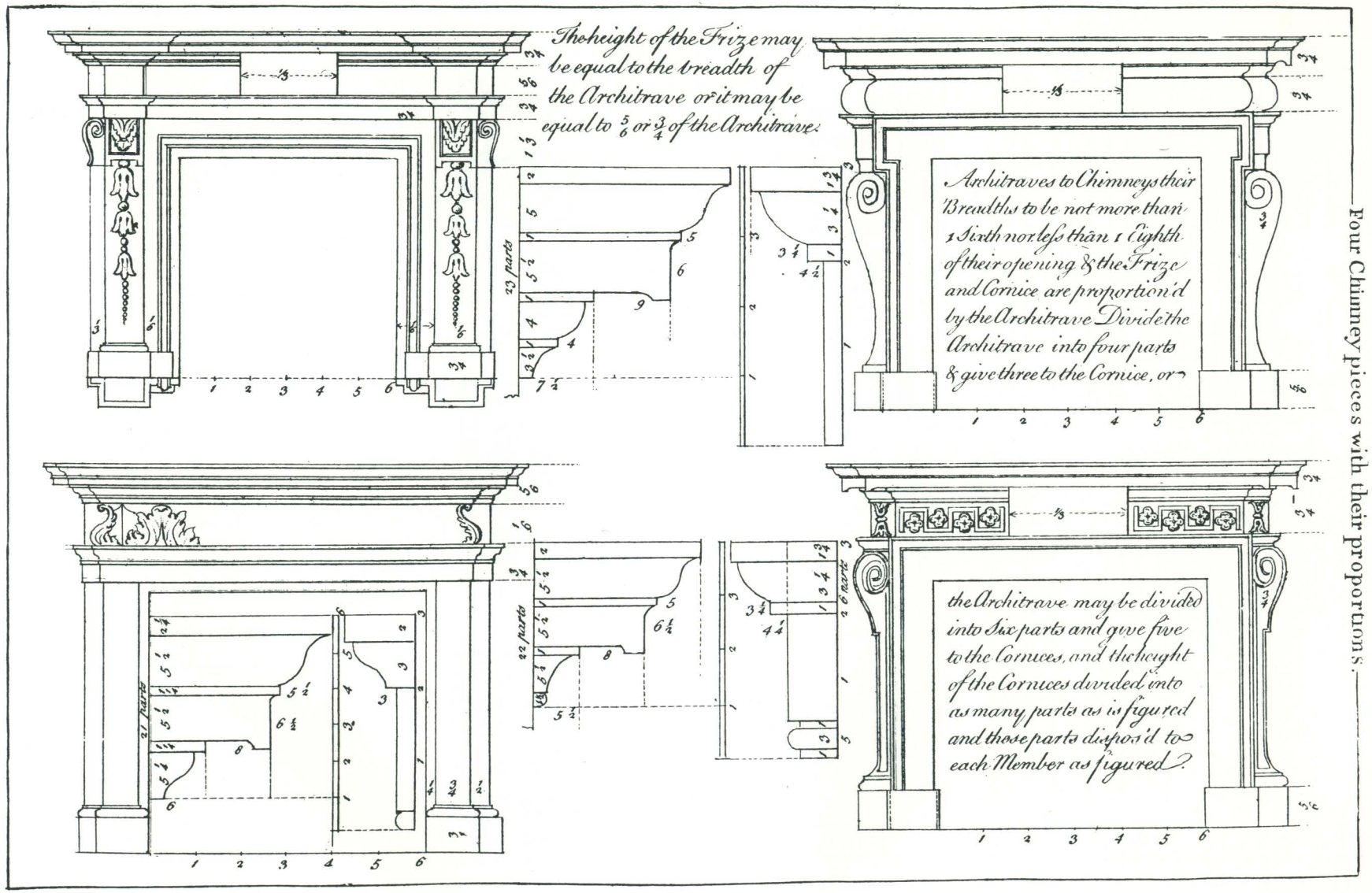


Divide the height of the Pedestal into 9 parts and give one, and one ¼

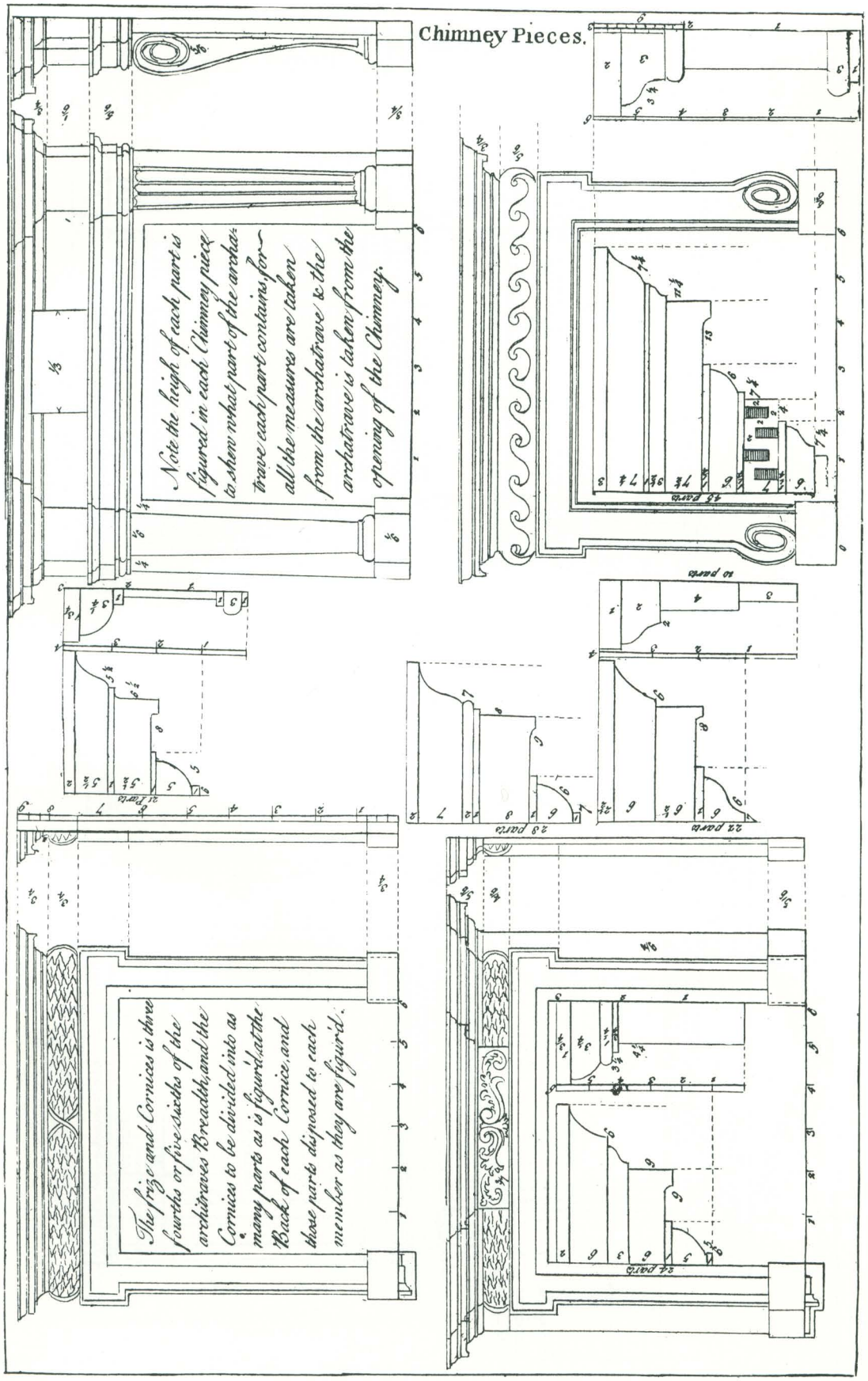


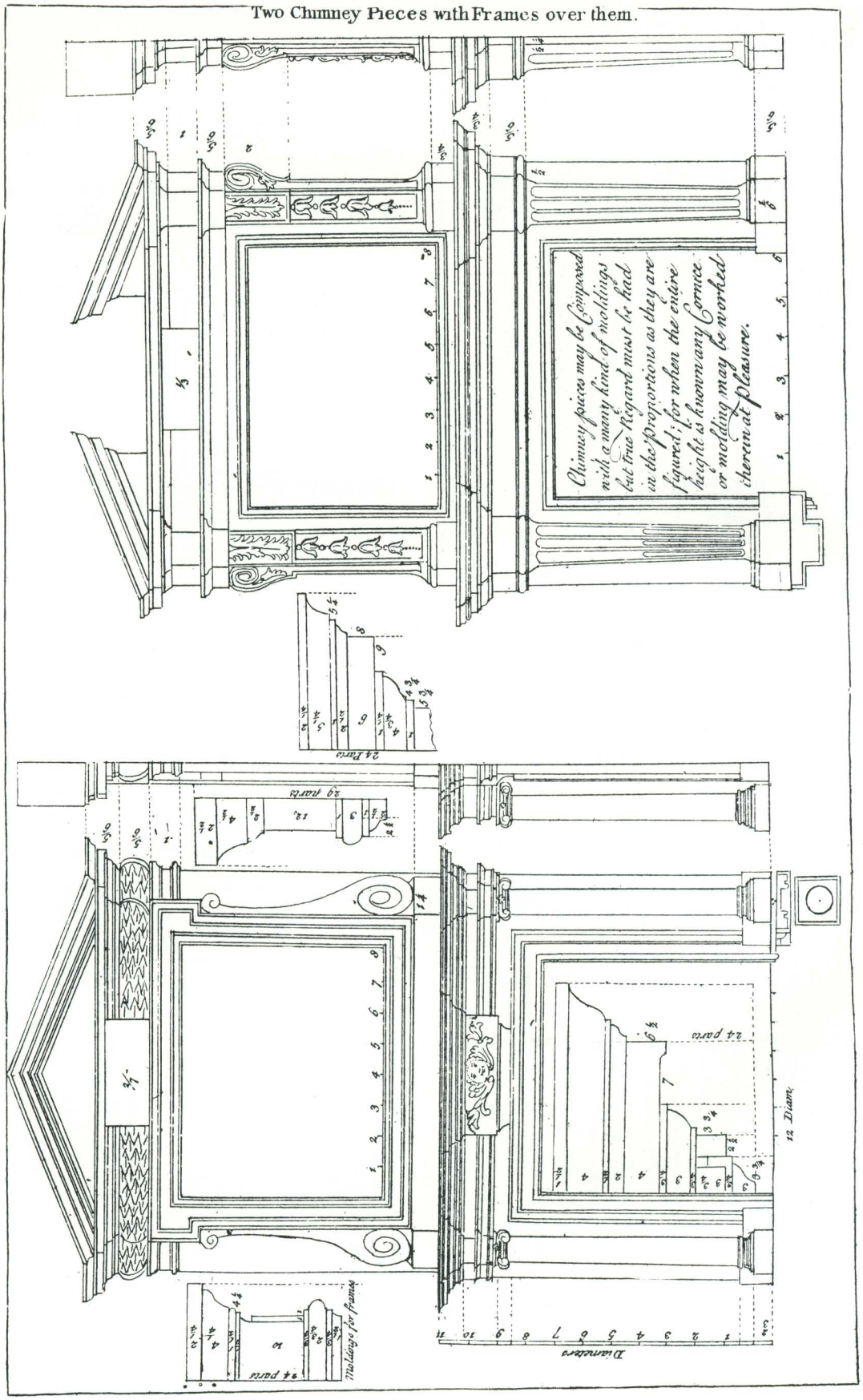
to the Subbase: 1 and 1 ¼ to the Plinth ⅗ or ½ of the Subbase to the height of the Base-molding: in the open part of the Subbase, the Ornaments are Frets and Guilochis, the heights to be divided into as many parts as they are figur'd, and them parts dispos'd to each member as figur'd.

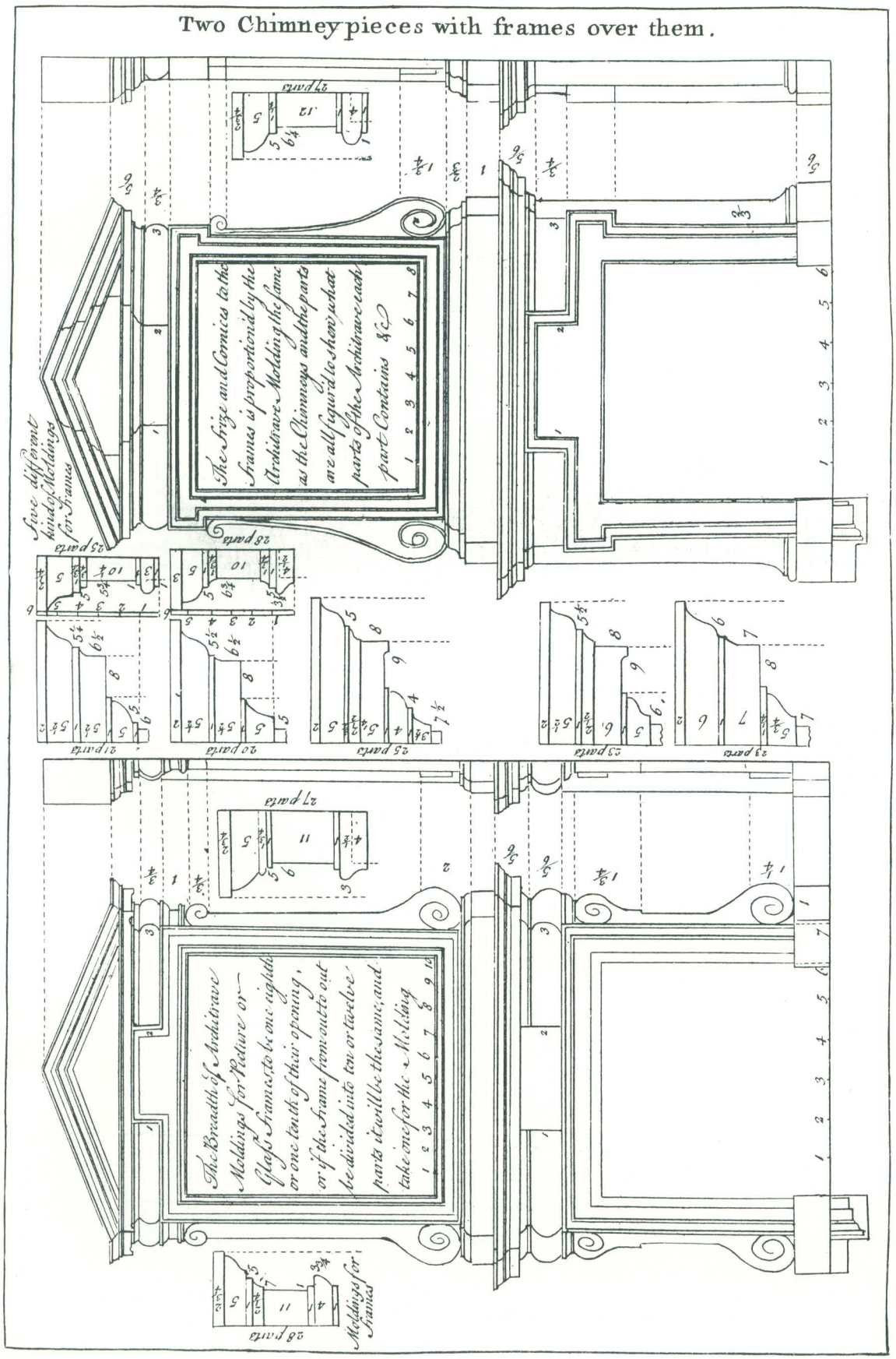
Base and Subbase for the Pedestal parts of Rooms

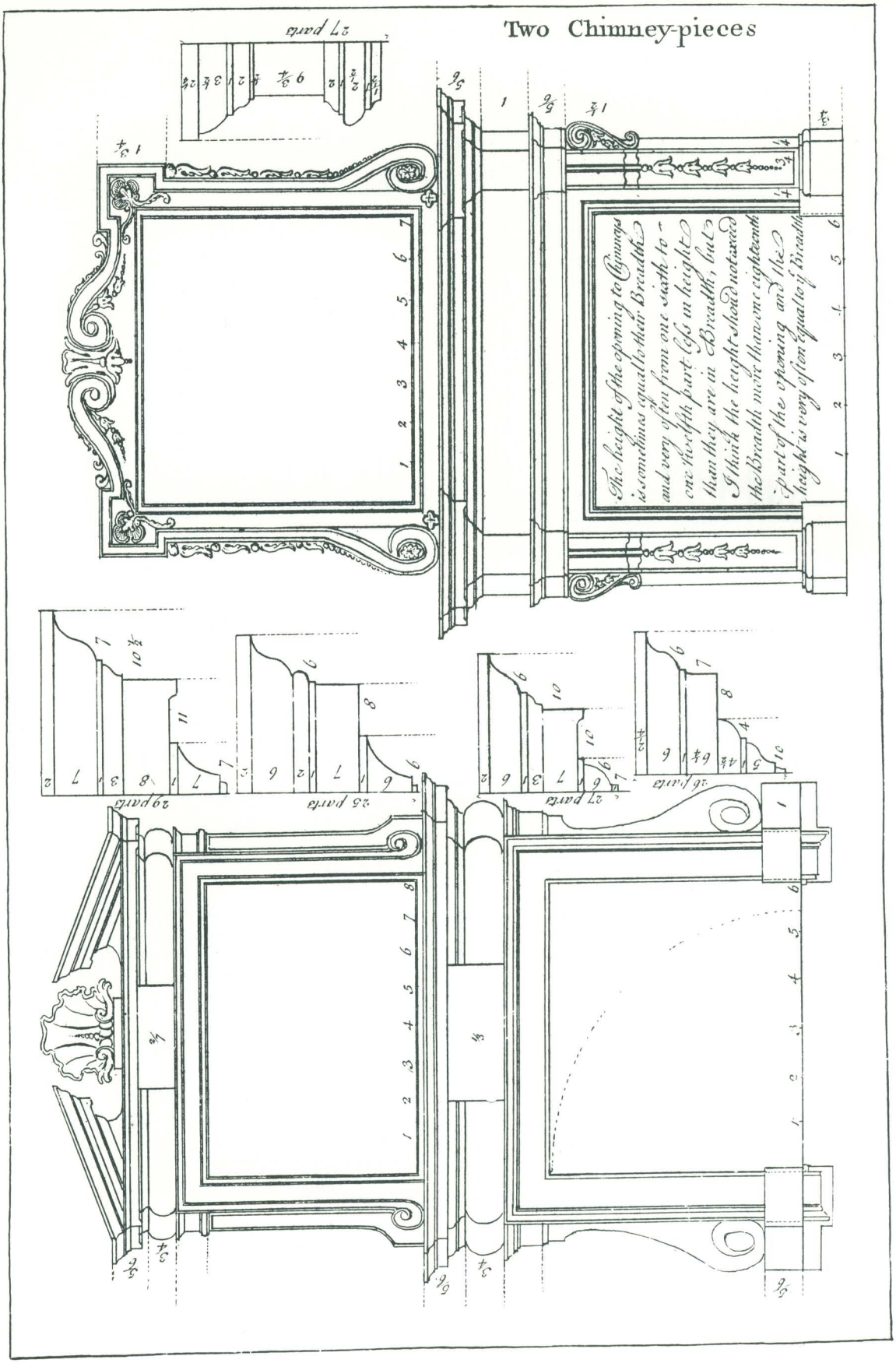

The height of the Frize may be equal to the breadth of the Architrave or it may be equal to 5/6 or 3/4 of the Architrave.
Architraves to Chimneys their Breadths to be not more than 1 Sixth nor less than 1 Eighth of their opening & the Frize and Cornice are proportion'd by the Architrave Divide the Architrave into four parts & give three to the Cornice, or
the Architrave may be divided into Six parts and give five to the Cornices, and the height of the Cornices divided into as many parts as is figured and those parts dispos'd to each Member as figured.

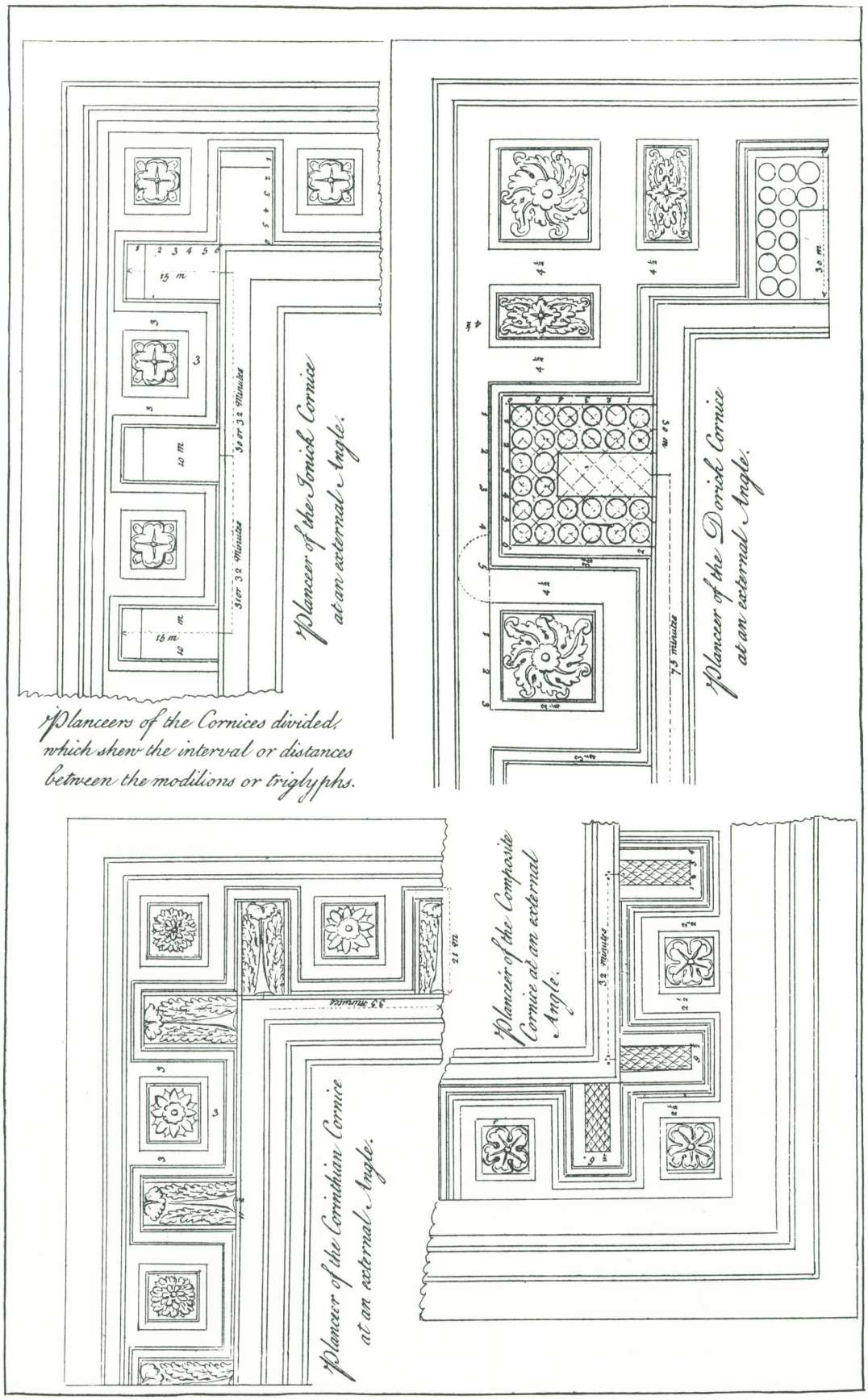
Four Chimney pieces with their proportions.


Chimney Pieces.
Note the height of each part is figured in each Chimney piece to shew what part of the architrave each part contains, for all the measures are taken from the architrave & the architrave is taken from the opening of the Chimney.
The frize and Cornice is three fourths or five sixths of the architraves Breadth, and the Cornice to be divided into as many parts as is figured at the Back of each Cornice, and those parts disposed to each member as they are figured.

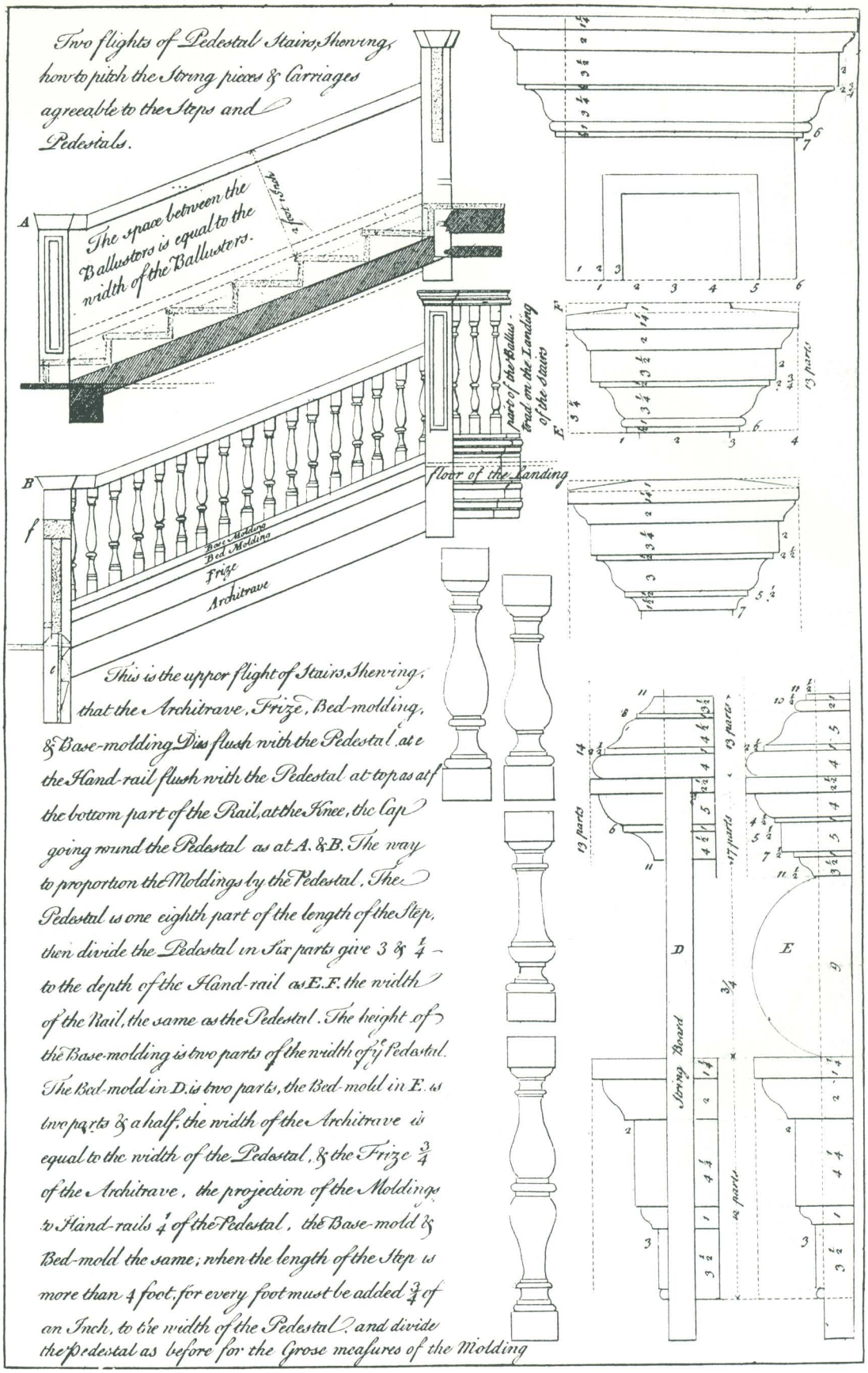

Two Chimney Pieces with Frames over them.
Chimney piece may be Compared with a many kind of mouldings but true Regard must be had in the Proportions as they are figured, for when the entire height is knowmany Cornice or moulding may be worked therein at pleasure.
24 Parts
29 parts
24 parts
12 Diam.
Diameters
94 parts
Round for Glasses


Two Chimney pieces with frames over them.
Five different kinds of Mouldings for Frames
The Size and Cornices to the Frames is proportional by the Architrave Moulding of the same as the Chimneys and the parts are all figured to shew what parts of the Architrave each part Contains &c
1 2 3 4 5 6 7 8
The Breadth of Architrave Mouldings for Picture or Glass Frames to be one eighth or one tenth of their opening, or if the Frame form'd to be divided into ten or twelve parts it will be the same, and take one for the Moulding
1 2 3 4 5 6 7 8 9 10
Mouldings for Frames

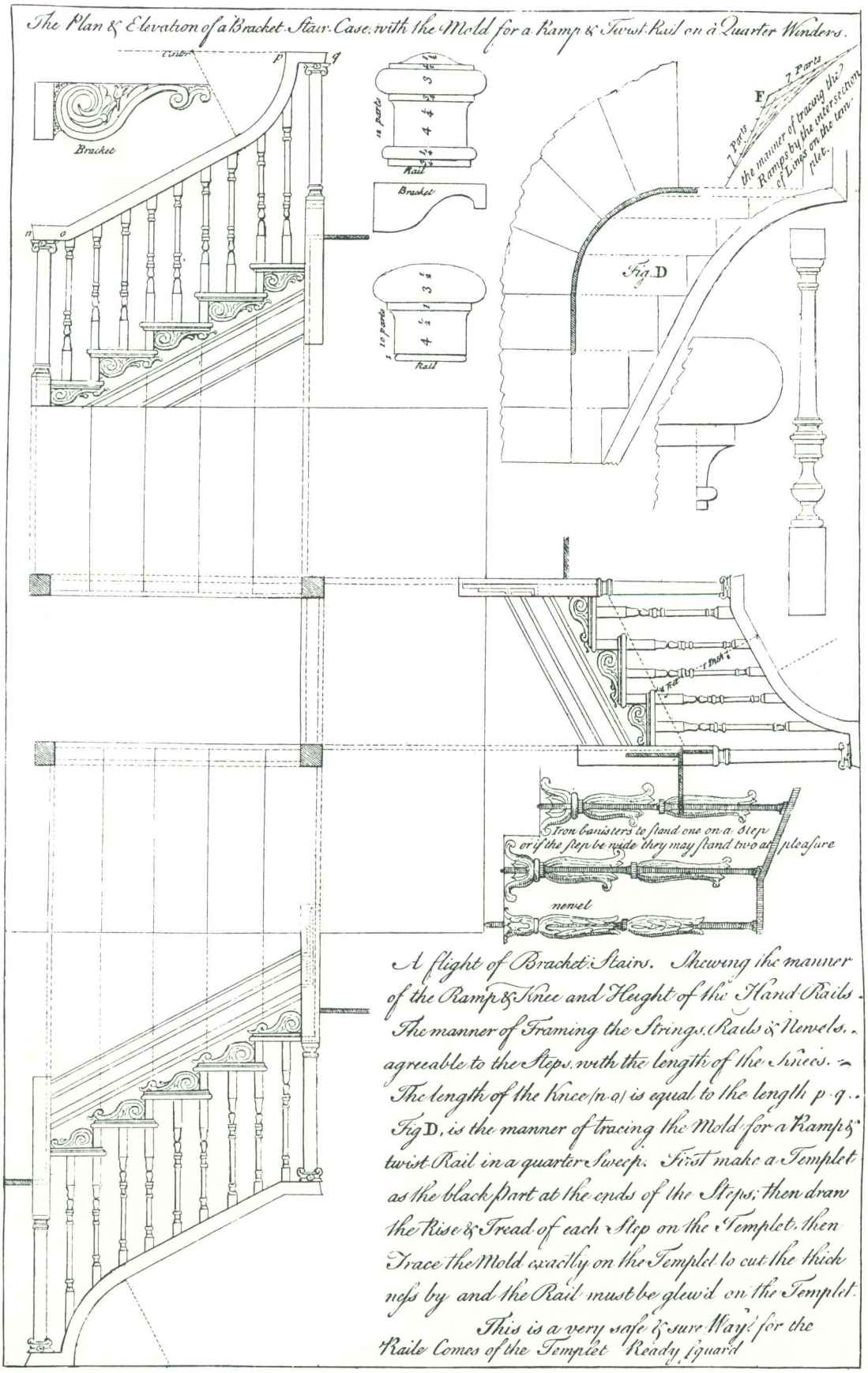

Two Chimney-pieces
27 parts
The height of the opening to Chimneys is sometimes equal to their Breadth and very often from one sixth to one seventh part less in height than they are in Breadth, but I think the height should not exceed the Breadth nor be lower than nine eighteenth part of the opening and the height is very often equal to of Breadth
29 parts
25 parts
27 parts
25 parts


Plan of the Ionick Cornice at an external Angle.
Plan of the Doric Cornice at an external Angle.
Plan of the Corinthian Cornice at an external Angle.
Plan of the Composite Cornice at an external Angle.

Plan of the Cornices divided, which shew the interval or distances between the modilions or triglyphs.

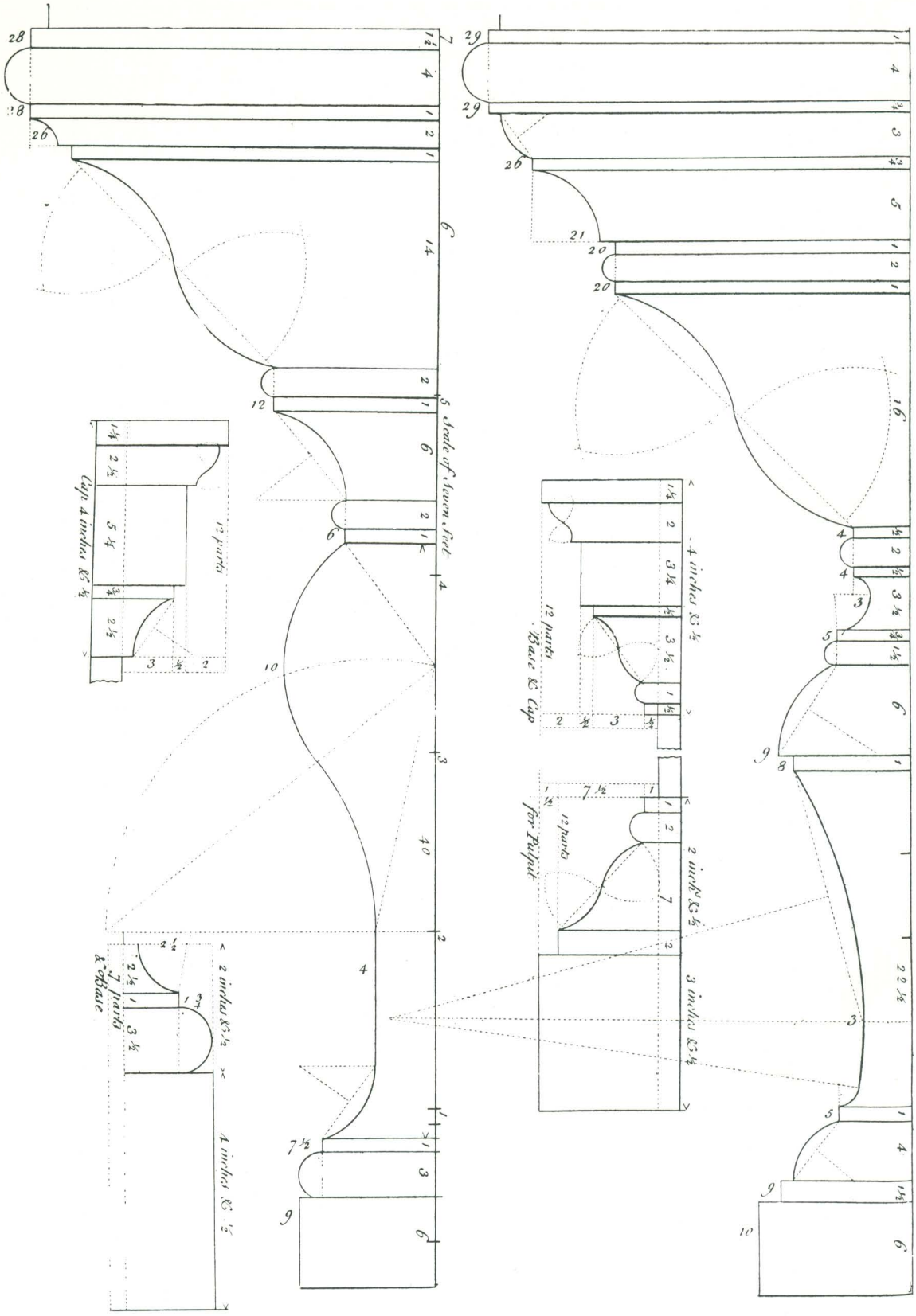


This is the upper flight of Stairs, Shewing that the Architrave, Frize, Bed-molding, & Base-molding Dies flush with the Pedestal, at e the Hand-rail flush with the Pedestal at top as at f the bottom part of the Rail, at the Knee, the Cap going round the Pedestal as at A. & B. The way to proportion the Moldings by the Pedestal. The Pedestal is one eighth part of the length of the Step, then divide the Pedestal in Six parts give 3 & 1/4 — to the depth of the Hand-rail as E.F. the width of the Rail, the same as the Pedestal. The height of the Base-molding is two parts of the width of y^e Pedestal. The Bed-mold in D. is two parts, the Bed-mold in E. is two parts & a half, the width of the Architrave is equal to the width of the Pedestal, & the Frize 3/4 of the Architrave, the projection of the Moldings to Hand-rails 1/4 of the Pedestal, the Base-mold & Bed-mold the same; when the length of the Step is more than 4 foot, for every foot must be added 3/4 of an Inch, to the width of the Pedestal, and divide the Pedestal as before for the Grose measures of the Molding


The Plan & Elevation of a Bracket Stair Case with the Mold for a Ramp & Twist Rail on a Quarter Winders.
Bracket
Rail
Bracket
Rail
Fig. D
the manner of tracing the Ramps by the intersection of Lines on the templet.
Iron banisters to stand one on a Step or if the Step be wide they may stand two at pleasure
newel

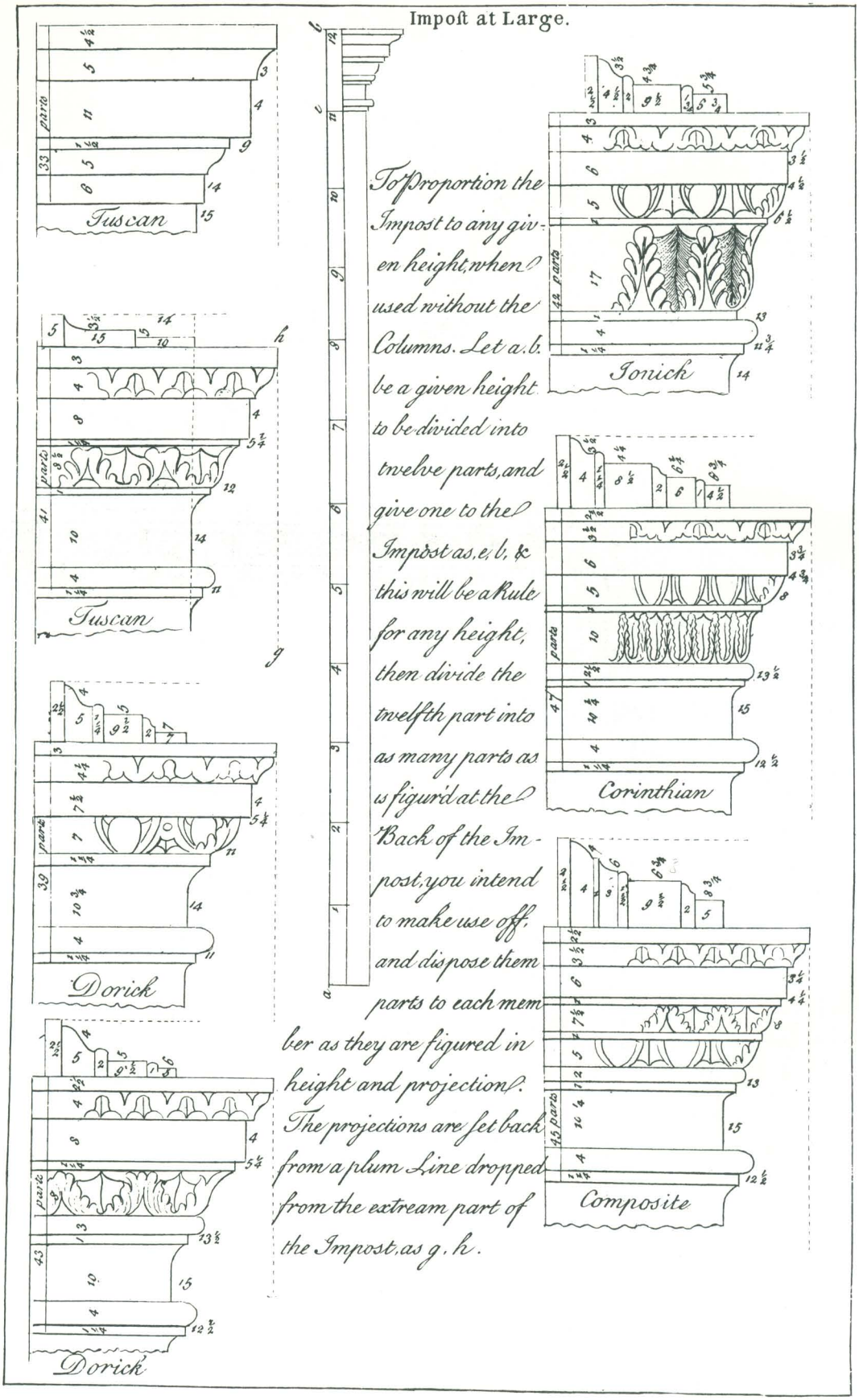
A flight of Bracket Stairs. Shewing the manner of the Ramp & Knee and Height of the Hand Rails. The manner of Framing the Strings, Rails & Newels. agreeable to the Steps with the length of the Knees. The length of the Knee (n o) is equal to the length p q. Fig D, is the manner of tracing the Mold for a Ramp & twist Rail in a quarter Sweep. First make a Templet as the black part at the ends of the Steps; then draw the Rise & Tread of each Step on the Templet, then Trace the Mold exactly on the Templet to cut the thickness by and the Rail must be glewid on the Templet.

This is a very safe & sure Way for the Raile Comes of the Templet Ready Squard



Half of two Supporters for Pulpits at Large,
with the Base and Cornice for the Body of the Pulpits at Large

Two Pulpits one a Pentagon the other a Hexagon, with their Plans and Types, and all the parts figur'd by the Scale of Feet and Inches, every Member are Inches or part of an Inch as they are figur'd.
Type
24 Inches
36
9
31 ½ Inches
28 Inches
25 ½ Inches &c.
28
28
26
12
6
6
10
40 Inches
4
7 ½
9
Scale of Feet
Wall
Plan
The Flowers of the Pannels
The Planceer of the Types
All the projections are set from the Centeral Lines of the Pulpits which is plain to inspection
Plan
Type
28 Inches
Centeral Line
36
9
34
29
27
29
29
26
21
20
20
18 Inches
21 ½ Inches
3
5
9
10 ½
Scale of Feet
Page 62


Impost at Large.
To Proportion the Impost to any given height, when used without the Columns. Let a.b. be a given height to be divided into twelve parts, and give one to the Impost as, e, b, &c this will be a Rule for any height, then divide the twelfth part into as many parts as is figur'd at the Back of the Impost, you intend to make use off, and dispose them parts to each member as they are figured in height and projection. The projections are set back from a plum Line dropped from the extream part of the Impost, as g. h.
Tuscan
Tuscan
Dorick
Dorick
Ionick
Corinthian
Composite